



Report on the Investigation into the Economics of Jute Growing

[*Season : 1956-57*]

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Director, Economic Research

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INDIAN CENTRAL JUTE COMMITTEE
Calcutta
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CONTENTS

I.	Introduction	1
II.	Report on Jute	2
	<p>Jute acreage in relation to the size of holdings—Composition of jute plots under cost study—Weather and its effect on jute and paddy—Cost of production of jute—Profit and loss and net income from jute—Comparative costs and profits on the cash-rented and share-rented plots—Analysis of operational cost—Human and cattle labour—Labour rates—Seed and manure—Yield of jute—Operational cost per maund—Rent—Input and output in relation to the size of holdings—Cash expenses of jute cultivation—Comparative position of the high—and low-yielding farms—Summary.</p>	
III.	Report on Paddy	36
	<p>Area under paddy—Cost structure—Human and cattle labour—Seed and manure—Operational cost—Yield per acre—Rent—Cost of production—Profit and loss and income from paddy—Input and output in relation to the size of holdings for paddy—A comparative study of jute and paddy.</p>	
IV.	Farmer's Economy	57
	<p>Size of the farm family—Farmer's income—Sources of farm income—Income in cash and kind—Farmer's family budget—Food consumption—Expenditure in cash and kind—Balance in cash and kind—Income and expenditure in relation to the size of holdings.</p>	

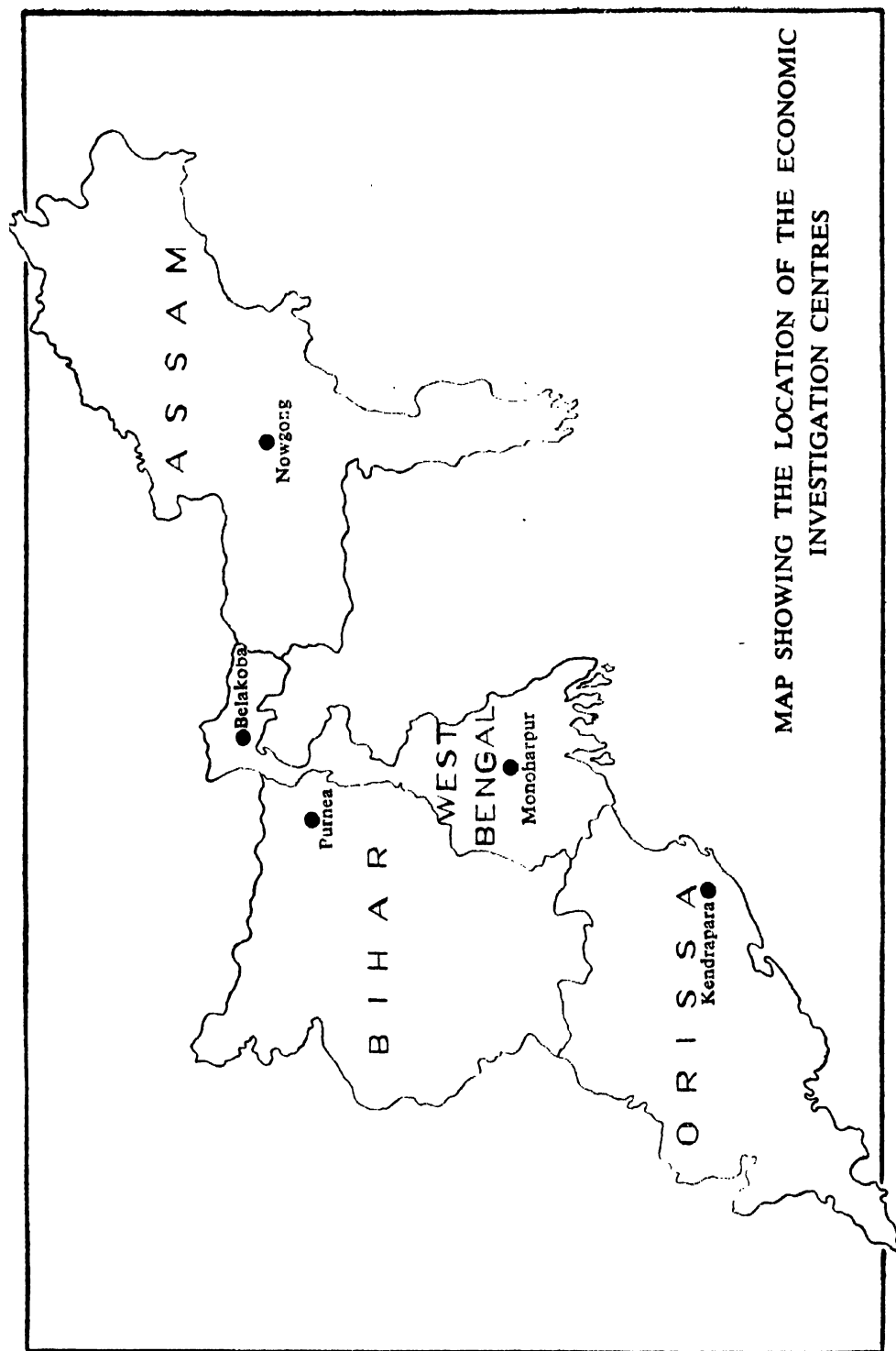
APPENDIX

Note on the Crop Cutting Experiments on Jute	81
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Tables

i—xxxv

MAP SHOWING THE LOCATION OF THE ECONOMIC
INVESTIGATION CENTRES



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REPORT ON THE INVESTIGATION INTO THE ECONOMICS OF JUTE GROWING (1956-57)

I. INTRODUCTION

This is the ninth and last year of investigation into the economics of jute growing at Monoharpur, Belakoba, Purnea, Kendrapara and Nowgong. From 1957-58, the location of the enquiry has been shifted to other districts of the jute growing States in order to study the agro-economic problems of the jute growers in new regions.

In 1956-57, the study covered a total of 193 farms in the five selected centres against 196 in the two previous years. For reasons beyond control, three farms had to be dropped at Monoharpur for which no suitable substitutes were available. The year, as we shall see later, was particularly bad for jute in the two West Bengal centres, namely, Monoharpur and Belakoba. Germination of seeds totally failed on about three-fourths of the sown area at the former centre while at the latter, the ultimate loss of crop was nearly on 40% of the area but it occurred at various stages of plant growth. Thus the farming activities of 12 out of 37 growers at Monoharpur in respect of jute ended with sowing. Moreover, one farm each at Purnea and Nowgong failed to sow any jute though they are all jute growers in normal years. Likewise, none of the varieties of paddy was produced on seven of our selected farms. So the study of the costs of production of jute and paddy and income therefrom has been based on 179 and 186 farms respectively, after excluding the farms* on which particular crops were not grown at all. The family budget

* The large number of submerged plots at Monoharpur on which jute seeds did not germinate, has been similarly left out from the scope of cost study.

study has, however, been based on all the farms including those excluded from the cost analysis.

During the nine years of investigation, the size of holdings of the selected farmers underwent considerable changes on account of such happenings as partition of family property, sale and purchase of land, leasing in and leasing out of plots, etc. In order to see how far our samples chosen some nine years back and a few replaced thereafter, still represented the farms in general within the investigation area, a detailed holding census was taken during the year under report. The distribution according to the size of holdings of all the farms somewhat differed from that of the sample farms and not unexpectedly, though it was not of a serious nature. This is, of course, unavoidable in a continuous survey of the nature we have undertaken.

The crop cutting experiments on jute were performed, as in the earlier years, on a sub-sample of plots chosen at random from out of all the jute plots under cost study. The results of the experiments together with a brief analysis of the findings thereon appear in the form of a note appended to this report.

This being the last of the series of annual reports, a few consolidated tables incorporating the more important data compiled in the course of investigation since 1948-49, are presented on pages i—xxxv for ready reference.

II. REPORT ON JUTE

Drought followed by heavy rains rendered the weather in 1956 generally unfavourable to jute. It was at Kendrapara that sowing smoothly progressed and even recorded some marked increase after irrigation, but it suffered at Nowgong and Purnea as can be seen from the figures compiled in the last three columns of Table 1 on page 3.

Sowing was done to the same extent as a year ago at Monoharpur but, as we shall shortly see, the jute crop suffered much owing to incessant rains just after sowing. Seeds on large tracts of jute land on which rain water accumulated, hardly got any opportunity even to sprout. At Belakoba, on

Table 1—Distribution of Farms and Plots, and Area under Jute

State	District	Centre	Total no. of farms	Total no. of jute growing farms	Total no. of plots*	Area sown with jute per farm* (Acres)	Proportion of cultivated land under jute* (Per cent)	Proportion of cultivated land under jute in 1955-56* (Per cent)
West Bengal	Hooghly	Monoharpur	37	37**	216	0.95†	35.24	32.40
West Bengal	Jalpaiguri	Belakoba	40	40	131	1.29	25.26	26.71
Bihar	Purnea	Purnea	40	39	105	1.18	28.61	38.78
Orissa	Cuttack	Kendrapara	36	36	213	1.32	31.16	26.05
Assam	Nowgong	Nowgong	40	39	169	1.35	45.28	53.53
		All centres (1956-57)	193	191	834	1.22	31.75	...
		All centres (1955-56)	196	191	812	1.25	34.16	34.16

* Including the plots under the improved methods of jute cultivation

** 12 among them did not grow any jute though sowing was done on all the farms.

† 0.36 acres excluding the area not covered by the cost study

the other hand, sowing somewhat increased but eventually the weather proved too hostile to the crop. Sharp fall in the proportion of jute area at Purnea in 1956 is attributable not so much to less sowing as larger plantings of *aman*. All these had the effect of slightly reducing the intensity of jute cultivation in the investigation centres as compared to the year before.

Jute acreage in relation to the size of holdings

We may see further how the intensity of jute cultivation differs for the different size group of farms. The figures set out for the purpose in Table 2 on pages 5--6 besides giving the average sizes of holdings in each group, shows the following characteristics:--

- (a) The average size of holdings, calculated at little less than 5 acres, is larger at Purnea, Belakoba and Kendrapara than at Monoharpur or Nowgong. The intensity of jute cultivation as represented by the percentage of jute to total cropped area, is more at the latter two centres where the average holding size is smaller.
- (b) For the average farm, the total cultivated area increases with the size of holdings and so does the area under jute barring two exceptions in the highest group at Purnea and Kendrapara.
- (c) The intensity of jute cultivation varies with the change in the farm size but not in uniform order. It also greatly differs from one centre to another. Still the intensity is found to be generally the highest among farms in the smallest size group. It first diminishes and then increases to fall again as the holding size becomes larger. The largest farms have the minimum proportion of land under jute except, of course, at Nowgong where they devote nearly as much of the cropped area to jute as is done by the farms in the lowest group.

Table 2—Intensity of Jute Cultivation in relation to the Size of Holdings

Size of holdings	MONOHARPUR						BELAKOBA						PURNEA					
	Acres	No. of farms	Average size of farm	Culti- vated area per farm*	Area under jute per farm*	Jute area as % of culti- vated area	No. of farms	Average size of farm	Culti- vated area per farm*	Area under jute per farm*	Jute area as % of culti- vated area	No. of farms	Average size of farm	Culti- vated area per farm*	Area under jute per farm*	Jute area as % of culti- vated area		
I	0-1.50	11	0.81	0.79	0.40	50.0	...	...	...	...	...	2	1.12	1.02	0.31	29.9
II	1.51-3.00	15	2.36	2.36	0.78	32.9	2	2.86	1.68	0.53	31.3	5	2.58	2.54	0.76	30.0		
III	3.01-4.50	4	3.66	3.66	1.56	42.5	12	3.69	3.30	0.84	25.3	8	3.70	2.65	0.92	34.8		
IV	4.51-6.50	5	5.70	5.59	1.81	32.3	14	5.57	4.91	1.21	24.5	10	5.01	3.73	0.92	24.8		
V	6.51-9.00	2	6.93	6.52	1.94	29.8	6	7.33	6.42	1.67	25.9	6	7.32	4.86	2.17	44.5		
VI	Above 9.00	...	...	...	...	...	6	12.93	9.08	2.30	25.3	9	12.86	7.32	1.50	20.6
All farms		37	2.74	2.70	0.95	35.2	40	6.24	5.12	1.29	25.3	40	6.36	4.13	1.18	28.6		

* Jute growing farms only

Continued

Table 2—Intensity of Jute Cultivation in relation to the Size of Holdings

Group	KENDRAPARA										NOWGONG										ALL CENTRES									
	Size of holdings	No. of farms	Average size of farm	Culti- vated area per farm*	Area under jute per farm*	Jute area as % of culti- vated area	No. of farms	Average size of farm	Culti- vated area per farm*	Area under jute per farm*	Jute area as % of culti- vated area	No. of farms	Average size of farm	Culti- vated area per farm*	Area under jute per farm*	Jute area as % of culti- vated area	No. of farms	Average size of farm	Culti- vated area per farm*	Area under jute per farm*	Jute area as % of culti- vated area									
																						Acres	No.	Acres	No.	Acres	%	Acres	No.	Acres
I	0—1.50	3	1.13	0.67	0.33	50.0	7	0.92	0.98	0.55	56.8	23	0.86	0.85	0.42	49.9														
II	1.51—3.00	8	2.40	1.91	0.72	39.9	17	2.34	2.24	0.99	44.0	47	2.41	2.22	0.83	37.5														
III	3.01—4.50	7	4.03	3.67	1.19	32.4	6	4.07	3.88	1.47	37.9	37	3.81	3.36	1.10	32.8														
IV	4.51—6.50	5	5.48	4.67	1.62	34.7	8	5.19	4.55	2.11	46.4	42	5.37	4.61	1.43	31.0														
V	6.51—9.00	11	7.60	6.32	1.93	30.5	2	7.87	6.40	3.46	54.0	27	7.45	6.04	2.04	33.7														
VI	Above 9.00	2	11.65	8.79	1.59	18.1	...	...	...	...	...	17	12.74	8.16	1.81	22.2									
All farms		36	5.11	4.24	1.32	31.2	40	3.20	2.98	1.35	45.3	193	4.75	3.85	1.22	31.8														

*Jute growing farms only

Composition of jute plots under cost study

Before giving the cost estimates of jute, it would be proper to know the extent to which the sample jute plots have to pay cash rent or share rent in kind. The presence of too many share-cropped plots would inflate the cost because of much higher value of rent for those plots (paid in half or any other fixed portion of the crop grown). The following table gives the number and the proportional area of cash- and share-rented plots in our sample:—

Table 3—Distribution of Jute Plots cultivated on Cash Rent and Share Rent*

Centre	Cash-rented		Share-rented	
	Total no. of jute plots	Percentage of cash-rented to total jute area	Total no. of jute plots	Percentage of share rented to total jute area
Monoharpur ...	184	79.98	20	20.02
Belakoba ...	67	58.94	51	41.06
Purnea ...	71	76.24	24	23.76
Kendrapara ...	126	55.85	67	44.15
Nowgong ...	136	85.13	21	14.87
All centres (1956-57) ...	584	71.17	183	28.83
All centres (1955-56) ...	565	69.42	189	30.58

* Excluding the line-sown plots

From a study of the same farms in 1955-56 and 1956-57 it was found that the percentage of land taken on share for jute cultivation was somewhat less in the latter than in the former year at Kendrapara and Nowgong, but a little higher at Purnea. This change, however, is a normal feature in every year though it is also partly accounted for by the land reform policies of the State Governments as a result of which leasing out of plots to the same share-cropper year after year is not favoured. Also, keeping lands fallow for a long time (e.g., at Purnea) is not considered safe by the owners.

Weather and its effect on jute and paddy

The centres like Nowgong and Purnea made a bad start with an adverse sowing-time weather but afterwards they fared

comparatively better than the other centres where the initial good weather was followed by very unfavourable conditions. This was mainly due to the uneven distribution of rainfall as the following table would clearly indicate:—

Table 4—Monthly Distribution of Rainfall
(Inches)

Month	Monoharpur		Belakoba		Purnea		Kendrapara		Nowgong	
	1955	1956	1955	1956	1955	1956	1955	1956	1955	1956
March ...	Nil	0.25	0.75	2.75	0.21	0.13	Nil	*	2.49	1.52
April ...	1.50	1.17	2.66	9.82	Nil	0.14	N.A.	Nil	9.26	9.71
May ...	2.05	1.16	6.61	32.59	1.97	1.69	N.A.	2.10	10.94	6.92
June ...	6.35	16.90	27.92	25.66	8.92	19.32	N.A.	8.55	14.35	24.11
July ...	13.33	8.13	36.76	24.80	22.21	9.49	N.A.	6.59	21.06	6.92
August ...	5.49	7.63	21.93	25.03	16.25	15.00	9.68	8.25	19.92	21.18
September ...	10.68	15.27	12.27	15.44	5.41	27.16	19.95	11.30	11.93	3.84
October ...	5.20	4.74	3.25	11.99	1.72	11.65	17.87	9.50	2.69	1.26

N. A. = Not available

* Some light showers (actual figure is not available)

The early advent of heavy monsoon at Monoharpur and Belakoba wrought havoc to the jute crop. The weather took a favourable turn for transplanted *aman* at the latter centre but not at Monoharpur where that variety of paddy also suffered much due to shortfall of rains at the time of transplantation and flood at the growing stage. On the other hand, more showers than what are normal in June at Kendrapara and comparatively dry weather in July at Purnea followed by heavy rains in August-September caused significant damage to jute. This greatly helped paddy at the former centre while at the latter, both the major crops were adversely affected. At Nowgong, the weather proved generally favourable to jute and paddy though they could not altogether escape damage from thick growth of weeds and sudden rise of flood water which necessitated premature harvesting of jute* on 10% to 15% of the inundated area. The condition remained otherwise very good except for some retting difficulties created by scanty rains in July. Finally, pest attack at Purnea and Nowgong subsided automatically after a few

*Some premature harvesting of jute was also reported from Purnea and Kendrapara.

showers while at Kendrapara pests had to be controlled by spraying insecticides. The damage on this account was, however, negligible. It would thus be seen that the weather in all the centres except Nowgong was, by and large, adverse to jute, the worst sufferers being the farmers of Monoharpur and Belakoba.

Cost of production of jute

The centre-wise estimates of cost and yield of jute are given in Table 5 on page 11 and in Fig. 1.

As already mentioned, jute met with large scale failure at the two West Bengal centres and as such the average yield per acre was abnormally low. With a fall in output also at Kendrapara, the overall yield per acre declined by 17% in spite of a much better crop at Nowgong than in the preceding year. The crop that survived against heavy odds at Monoharpur and Belakoba involved very high cost and therefore, the total input per acre was not low in proportion to the small outturn. Consequently, the overall average cost of jute production went up by Rs. 1.50 per maund—from Rs. 19.86 in 1955-56 to Rs. 21.34 in 1956-57. The cost, however, increased in all but the Nowgong centre, the rise being abnormal in case of the two West Bengal centres.

Profit and loss and net income from jute

Obviously, jute cultivation was highly unprofitable at Monoharpur and Belakoba but not at the other three centres where jute was sold at much better prices than in the previous year. The profit was, however, exceedingly good at Nowgong as may be seen from Table 6 on page 12.

The average price of jute improved also at Belakoba, but it was nowhere near the cost. With virtual failure of the jute crop at Monoharpur, the quality of the fibre also deteriorated so much so that the average selling price declined below the 1955-56 level in contrast to an upward trend in the other centres. Even then, taking all the five centres together, the profit position of the average grower was not on the whole worse in 1956-57 as compared to the foregoing year, the reason being

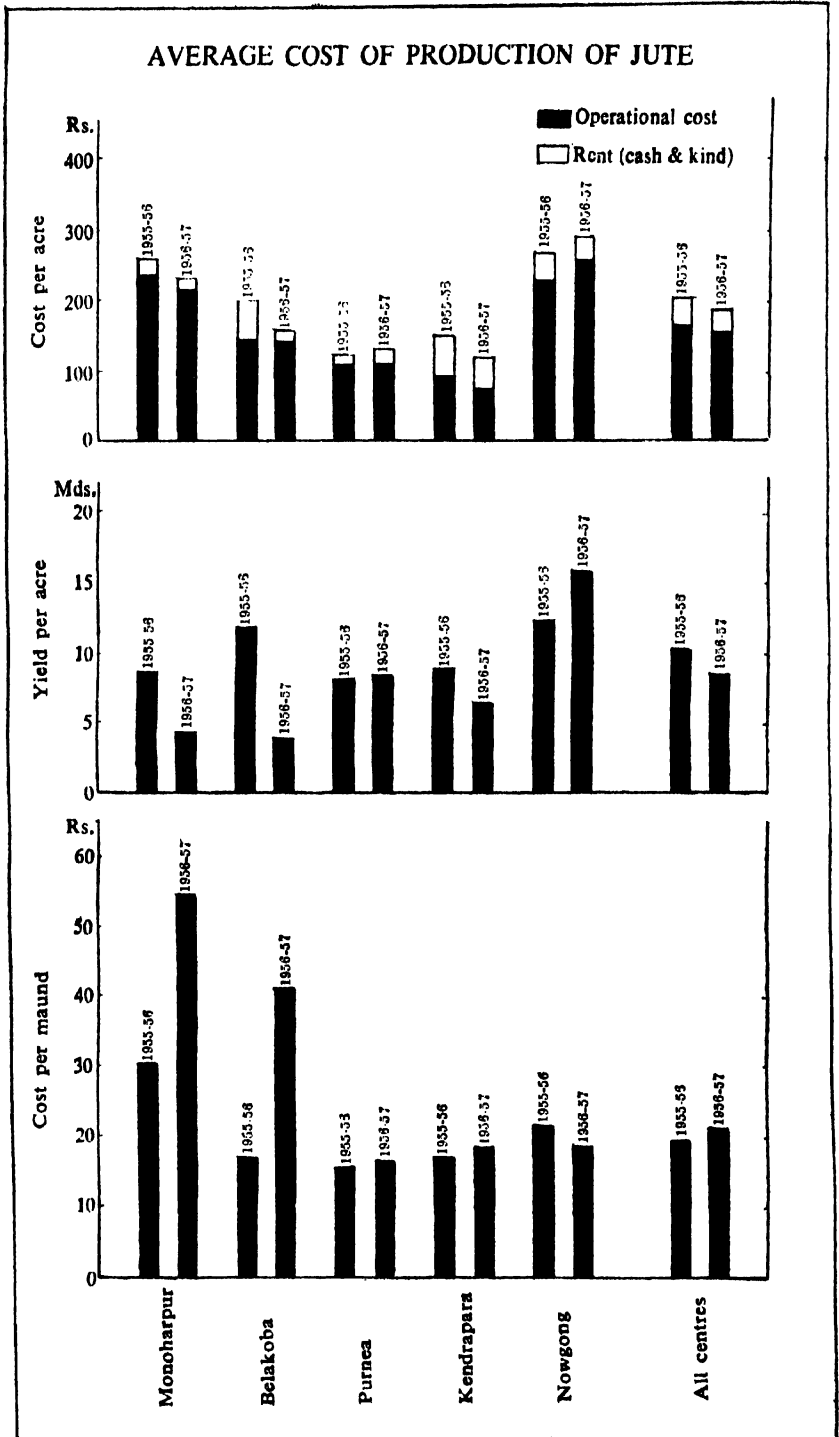


Fig. 1

Table 5—Average Cost of Production of Jute

Centre	Operational cost per acre		Rent* per acre		Total cost per acre		Yield per acre		Cost per maund	
	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Mds.	Mds.	Rs.	Rs.
Monoharpur ...	236.25	215.33	22.79	14.38	259.04	229.71	8.56	4.21	30.26	54.56
Belakoba ...	142.19	141.72	57.85	12.86	200.04	154.58	11.90	3.77	16.82	41.00
Purnea ...	107.93	108.74	13.28	21.22	121.21	129.96	8.02	8.06	15.10	16.12
Kendrapara ...	90.01	74.02	59.00	43.08	149.01	117.10	8.78	6.33	16.97	18.50
Nowgong ...	228.18	254.94	35.09	36.14	263.27	291.08	12.23	15.70	21.53	18.54
All centres ...	164.49	152.70	37.57	27.59	202.06	180.29	10.17	8.45	19.86	21.34
Share croppers (Belakoba) ..	132.24	137.50	132.30	30.57	264.54	168.07	10.84	2.73	24.41	61.56

*In cash and kind

Table 6—Profit and Loss on the Cultivation of Jute

Centre	Average price per md.		Average cost of production per md.		Profit (+) or loss (-) per md.		Average value of jute sticks per md. of fibre		Net profit (+) or loss (-) per md.		Average output per farm		Net profit (+) or loss (-) per farm	
	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Mds.	Mds.	Rs.	Rs.
Monoharpur ...	26.37	25.00	30.26	54.56	(-) 3.89	(-) 29.56	1.24	2.68	(-) 2.65	(-) 26.88	7.68	1.51	(-) 20.35	(-) 40.59
Belakoba ...	24.62	26.59	16.82	41.00	(+) 7.80	(-) 14.41	0.72	0.56	(+) 8.52	(-) 13.85	13.36	4.38	(+) 113.83	(-) 60.66
Purnea ...	21.89	24.47	15.10	16.12	(+) 6.79	(+) 8.35	0.94	1.00	(+) 7.73	(+) 9.35	9.30	8.78	(+) 71.89	(+) 82.09
Kendrapara ...	25.67	29.22	16.97	18.50	(+) 8.70	(+) 10.72	2.04	2.17	(+) 10.74	(+) 12.89	9.27	7.34	(+) 99.56	(+) 94.61
Nowgong ...	22.00	24.26	21.53	18.54	(+) 0.47	(+) 5.72	2.23	2.46	(+) 2.70	(+) 8.18	19.08	20.09	(+) 51.52	(+) 164.34
All centres ...	23.71	25.39	19.86	21.34	(+) 3.85	(+) 4.05	1.52	1.90	(+) 5.37	(+) 5.95	11.82	8.96	(+) 63.47	(+) 53.31
Share croppers (Belakoba) ...	23.97	26.53	24.41	61.56	(-) 0.44	(-) 35.03	0.73	0.47	(+) 0.29	(-) 34.56	11.31	2.72	(+) 3.28	(-) 94.00

that the average sale price per maund of the fibre increased by a margin more than the rise in its average production cost. Of course, comparatively poor output per farm reduced the total return of the average grower by nearly Rs. 10. The net income which is profit or loss *plus* value of family labour, dwindled further. This can be seen from the table below.

Table 7—Average Net Income from Jute
(Rupees per farm)

Centre	Net profit (+) or loss (-)	Average value of family labour	Net income from jute in 1956-57	Net income from jute in 1955-56
Monoharpur ...	(-) 40.59	39.50	(-) 1.09	(+) 103.50
Belakoba ...	(-) 60.66	75.70	(+) 15.04	(+) 211.76
Purnea ...	(+) 82.09	18.18	(+) 100.27	(+) 96.88
Kendrapara ...	(+) 94.61	39.56	(+) 134.17	(+) 145.99
Nowgong ...	(+) 164.34	113.32	(+) 277.66	(+) 174.01
All centres ...	(+) 53.31	59.04	(+) 112.35	(+) 147.35
Share croppers (Belakoba) ...	(-) 94.00	62.33	(-) 31.67	(+) 86.94

The average net income per farm including the value of family labour works out at Rs. 112.35 against only Rs. 53.31 which is the average net profit per farm. The net income of the average grower declined as compared to the previous year obviously due to the less contribution made by family labour towards jute cultivation. We have also seen in the past years that the opportunity for employment of self labour becomes very limited in years of adverse weather. It is important to note, again, that the position of the farmers at Monoharpur was so bad that they not only got no return for their own labour but failed even to realise the amount they spent in materials and hired labour.

**Comparative costs and profits on the
cash-rented and share-rented plots**

Turning now to the comparative costs and profits on the cash- and share-rented plots, it may be seen from the figures worked out separately for Belakoba that the operational costs are not significantly different for the two categories of plots. This is because the treatment does not differ whether the plot is

a cash-rented or a share-rented one. It is only the rent that greatly inflates the total cost on the latter plots.

In 1956-57, the share rent, calculated at Rs. 75.11 per acre, was not as high as in the other years due to the poor output of jute; still it was more than 10 times the cash rent, namely, Rs. 7.21 per acre. The corresponding costs of production (assuming the operational cost to be the same) were Rs. 26.96 and Rs. 18.92 per maund respectively on the two groups of plots. Consequently, while the average net profit on the cash-rented plots came to Rs. 70.69 per acre (or, Rs. 8.37 per maund), jute cultivation on the share-cropped plots was not just unprofitable with an average profit as low as Rs. 2.79 per acre or, Rs. 0.33 per maund.

Analysis of operational cost

Going beyond mere average estimates of operational cost which appear in Table 5, it would be worthwhile to examine how the conditions in the individual farms differ from that of the average. The distribution of farms according to their total input (*i.e.*, operational cost) per acre is given below.

Table 8---Operational Cost per Acre

Operational cost per acre (Rs.)	Number of farms at			Operational cost per acre (Rs.)	Number of farms at	
	Belakoba	Purnea	Kendra-para		Monohar-pur	Nowgong
Below 40	...	... (2)	2(2)	Below 175	6	1
40- 60	...	2 (2)	4	175-200	2	5
60- 80	...	...	15	200-225	2	3
80-100	(1)	10	11	225-250	4	6
100-120	2(2)	12	1	250-275	2	8
120-140	10(3)	6	1	275-300	1	5
140-160	13(1)	3	...	300-325	2	7
160-180	6	1	...	325-350	3	3
180 & above	2	1	...	350 & above	3	1
All farms (Wtd. average)	(Rs. 141.72)	(Rs. 108.74)	(Rs. 74.02)	All farms (Wtd. average)	(Rs. 215.33)	(Rs. 254.94)

N. B. The number of farms within the brackets are those on which jute totally failed. In working out the weighted average cost per acre, the cost incurred on the plots on which the crop ultimately failed was taken into account except at Monoharpur where the crop on about 75% of the sown area was lost just after sowing.

The centres fall into two classes in respect of operational costs. Generally speaking, jute cultivation requires a much higher outlay at Monoharpur and Nowgong than at the other three centres. It is also interesting to note that in the low cost centres, the farms fall into a distinct modal group about the average, e.g., the per acre input is between Rs. 120 and Rs. 160 for 70% of the farms producing jute at Belakoba, between Rs. 80-120 for 63% of farms at Purnea and between Rs. 60-100 for as many as 76% of them at Kendrapara. At the high cost centres, on the contrary, the range of variation in input is much wider and the farms are dispersed with widely varying costs per acre.

The structure of the average operational cost is given by the following cost distribution over the different items of input. The distribution of total cost including rent is also shown in Fig. 2.

*Table 9—Distribution of Operational Cost
(In percentages)*

Centre	Human labour	Cattle labour	Seed	Manure	Total
Monoharpur ...	80.71	8.45	4.54	6.30	100.00
Belakoba ...	47.30	15.89	7.56	29.25	100.00
Purnea ...	80.65	17.18	1.62	0.55	100.00
Kendrapara ...	72.21	9.46	4.16	14.17	100.00
Nowgong ...	87.50	10.37	1.51	0.62	100.00
All centres (1956-57) ...	75.17	12.49	3.39	8.95	100.00
All centres (1955-56) ...	81.46	11.77	3.22	3.55	100.00
Share croppers (Belakoba, 1956-57)...	46.31	16.64	7.91	29.14	100.00

It will be noticed that the pattern of cost distribution perceptibly changed from what was observed in the past years. Some marked improvement in the use of manure against a fall in the employment of human labour owing to natural disturbances, altered the percentage costs on those two items in almost all the centres and more so at Belakoba. But seed and cattle labour shared nearly the same proportions of cost as before.

DISTRIBUTION OF THE COST OF PRODUCTION OF JUTE

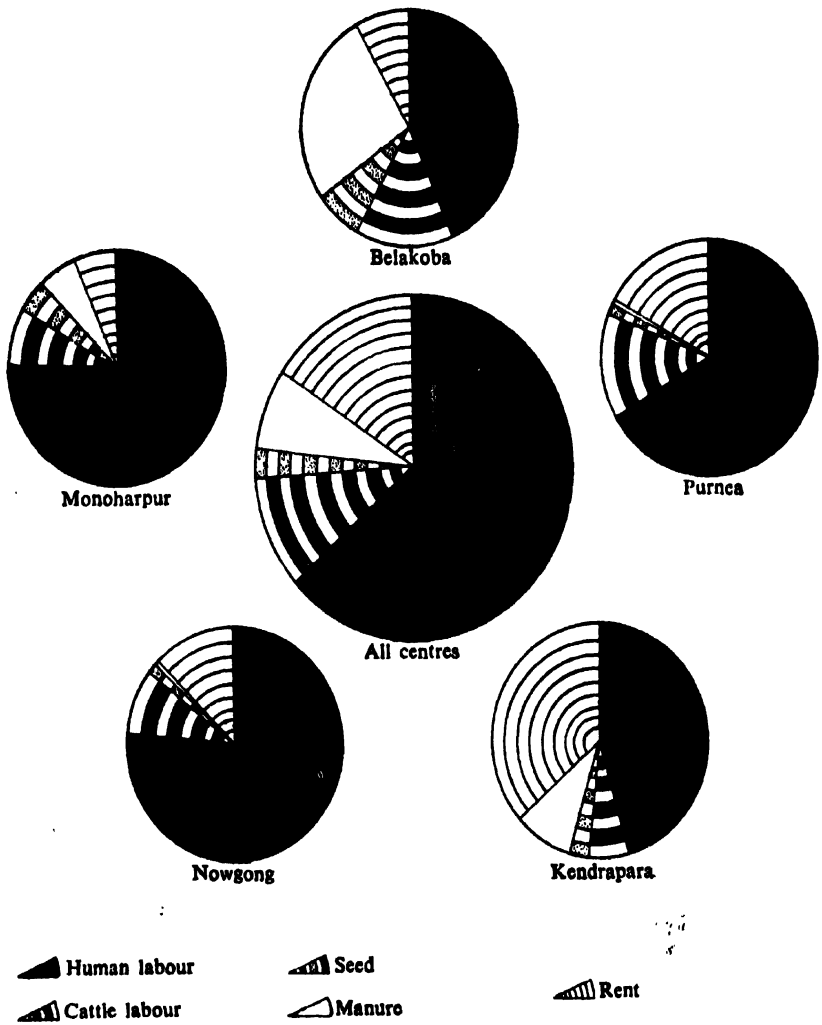


Fig. 2

Human and cattle labour

The operation-wise distribution of human labour is given in physical units in Table 10 on page 18 and in Fig. 3 below.

**OPERATION-WISE DISTRIBUTION OF HUMAN LABOUR
EMPLOYED IN JUTE CULTIVATION**
(Average for five centres)

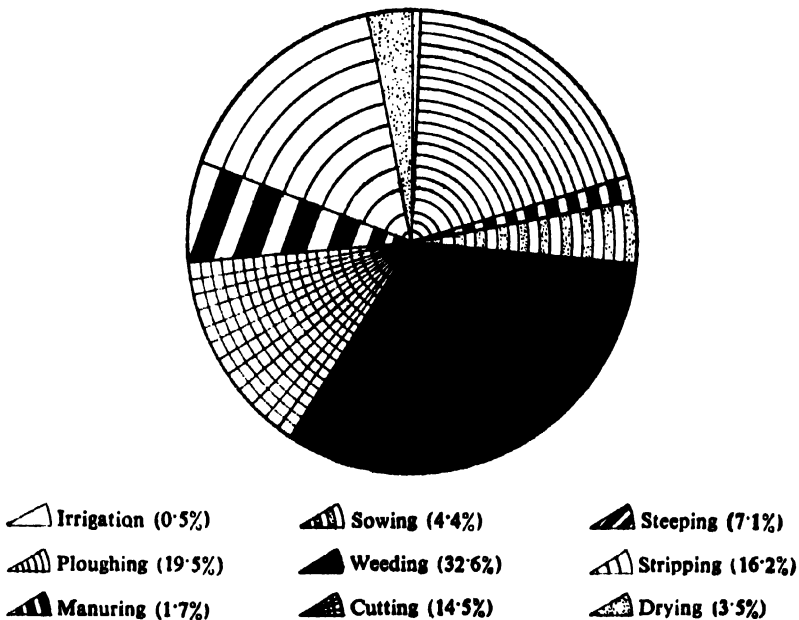


Fig. 3

A comparison of the figures with those of the previous year would show that the average consumption of human labour was less in 1956-57 in almost all the operations. This was partly because the pre-harvesting operations like land preparation and interculture could not be done thoroughly for want of opportunity and partly because the fall in output reduced the per acre requirement of labour for harvesting and post-harvesting operations. The human labour cost declined with the yield especially at Monoharpur, Belakoba and Kendrapara. Lower weeding cost, however, is not indicative of any technical efficiency but is merely explained by the fact that the operation could hardly be carried out on a fairly large number of submerged plots.

Table 11—Operation-wise Distribution of Human Labour
(Mandays* per acre)

Operations	Monoharpur		Belakoba		Purnea		Kendrapara		Nowgong		All centres		Share croppers (Belakoba)	
	Mandays	%	Mandays	%	Mandays	%	Mandays	%	Mandays	%	Mandays	%	Mandays	%
Irrigation	...	...	...	...	...	...	1.33	2.71	...	...	0.29	0.48	...	...
Ploughing	10.34	12.76	15.67	37.04	13.43	23.37	6.24	12.70	11.95	13.73	11.87	19.52	15.79	39.26
Manuring	3.54	4.37	1.50	3.55	0.03	0.05	1.72	3.50	0.49	0.56	1.05	1.73	1.61	4.00
Sowing	1.72	2.12	3.23	7.63	2.72	4.73	2.27	4.62	2.57	2.95	2.66	4.37	3.30	8.20
Weeding	37.03	45.70	13.44	31.77	16.02	27.88	14.43	29.35	30.41	34.94	19.81	32.58	12.37	30.76
Cutting	8.21	10.13	4.25	10.04	12.53	21.80	6.27	12.75	12.27	14.10	8.85	14.55	3.56	8.85
Steeping	5.99	7.39	0.26	0.61	1.73	3.01	6.97	14.18	7.80	8.96	4.32	7.10	0.24	0.60
Stripping	11.34	14.00	3.61	8.53	9.75	16.97	7.43	15.12	17.52	20.13	9.85	16.20	3.09	7.68
Drying	2.86	3.53	0.35	0.83	1.26	2.19	2.49	5.07	4.03	4.63	2.11	3.47	0.26	0.65
All operations (1956-57)	81.03	100.00	42.31	100.00	57.47	100.00	49.15	100.00	87.04	100.00	60.81	100.00	40.22	100.00
All operations (1955-56)	102.82	100.00	54.75	100.00	64.28	100.00	69.22	100.00	88.50	100.00	75.76	100.00	50.00	100.00

* 7 hours of work a day for an adult male is the measure of a manday.

Cattle labour cost, on the contrary, remained more or less the same as can be seen from the table below.

Table 11—Total Input of Cattle Labour
(Cattledays* per acre)

Centre			1955-56	1956-57
Monoharpur	...	...	15.22	18.98
Belakoba	...	...	50.91	53.96
Purnea	...	...	47.83	45.26
Kendrapara	...	...	26.72	22.38
Nowgong	...	...	44.86	42.35
All centres	...	...	39.01	40.36
Share croppers (Belakoba)	...	...	48.46	54.90

*5 hours of work a day for each head of bullock is the measure of a cattleday.

The above figures clearly suggest that the total volume of cattle labour which is used mostly for land preparation and harrowing, is less susceptible to variation (per acre) from year to year than human labour.

Labour rates

The labour rates which determine the money cost of the operations are given in the following table:—

Table 12—Labour Rate for Jute
(Average rate per day)

Centre	Wage rate		Cattle hire rate	
	1955-56	1956-57	1955-56	1956-57
	Rs.	Rs.	Rs.	Rs.
Monoharpur	2.035	2.145	0.946	0.957
Belakoba	1.747	1.584	0.397	0.417
Purnea	1.313	1.526	0.421	0.413
Kendrapara	1.026	1.087	0.315	0.313
Nowgong	2.207	2.562	0.619	0.624

The wage rates slightly increased in all the centres except Belakoba where the supply of agricultural labourers (share-croppers and landless labourers) was abundant. The corresponding demand was much less in the absence of employment

in the major crops like jute and *aus* paddy which largely failed. A similar condition no doubt prevailed at Monoharpur but without any adverse effect on the wage rates. The centre had some scope for alternative employment because of its proximity to Calcutta, but Belakoba had no such advantage. These local reasons apart, the general increase in wage rates, however small, may perhaps be attributed to rising prices of rice. The cattle hire rates, on the other hand, remained practically unchanged.

Seed and manure

The average quantities of jute seed and manure used per acre are given below with their average prices.

Table 13—Seed and Manure

Centre	Seed				Manure			
	Quantity per acre		Price per seer		Quantity per acre		Price per maund	
	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57
	Seers	Seers	Rs.	Rs.	Mds.	Mds.	Rs.	Rs.
Monoharpur ...	5.76	5.80	1.25	1.69	13.76	45.81	0.40	0.30
Belakoba ...	6.36	6.41	1.54	1.67	64.53	82.74	0.26	0.50
Purnea ...	3.65	3.73	0.93	0.47	*	2.35	0.25	0.25
Kendrapara ...	3.52	3.47	0.77	0.89	18.40	15.25	0.43	0.69
Nowgong ...	6.86	6.45	0.57	0.60	1.79	5.20	0.64	0.31
All centres ...	5.38	5.14	0.98	1.01	18.82	27.71	0.31	0.49
Share croppers (Belakoba) ...	6.37	6.64	1.52	1.64	62.49	80.41	0.26	0.50

*Negligible

Some resowings at the first three centres necessitated by the failure of germination slightly raised the seed rates. Otherwise, a tendency towards reducing the seed rate as envisaged by the improved methods of jute cultivation, was generally noticeable.

More striking is the improvement in the use of manure for jute, its average quantity increasing from about 19 maunds per acre in 1955-56 to 28 maunds per acre in 1956-57. It was at the two West Bengal centres that manuring was more intensive in the latter than in the former year and also as compared to

the other centres. But unfortunately natural calamity deprived the farmers of its benefit. Also at Nowgong and Purnea where manuring is rather an exception than a rule, farm yard manure found use on jute plots and not in insignificant quantities, particularly at the former centre. Doubtless, it speaks of growing manure-consciousness among the jute growers and this is further testified by its increased application at Belakoba in 1956-57 even in the face of higher prices. Cheaper manure, on the other hand, might have induced its greater use at the other three centres.

Yield of jute

The average estimates of yield per acre given earlier in the report would show that the year was good for jute alone at Nowgong. Apart from major crop failure with total loss of jute on 73.5% and 40.5% of the sown area respectively at Monoharpur and Belakoba, partial loss of fibre due to thin, stunted and sparsed growth of the surviving plants was not small either. Jute also completely failed on 15.9% of the sown area at Kendrapara and on 12.2% at Purnea, partial damage being comparatively heavy at the former centre.

The distribution of farms according to different ranges of yield per acre gives a better picture of the individual yield position than mere average. This is shown below.

Table 14—Yield per Acre of Jute

Yield per acre (Mds.)	Number of farms at				Yield per acre (Mds.)	No. of farms at Nowgong
	Monoharpur	Belakoba	Purnea	Kendrapara		
Nil	*	7	4	2	Below 6	2
Below 2	6	11	4	3	6—8	2
2—4	4	6	1	6	8—10	1
4—6	5	7	3	9	10—12	3
6—8	4	4	7	7	12—14	7
8—10	2	2	8	5	14—16	5
10—12	2	...	4	4	16—18	9
12—14	1	3	4	...	18—20	5
14 & above	1	...	4	...	20 & above	5
All farms (Wtd. average)	(4.21 mds.)	(3.77 mds.)	(8.06 mds.)	(6.33 mds.)	All farms (Wtd. average)	(15.70 mds.)

*12 farms (excluded from cost study)

Either the jute seeds failed to germinate or, the plants did not ultimately survive on 25 (including 12 farms excluded from cost study at Monoharpur) out of 152 selected farms of the four centres. The farms on which jute survived show two patterns of distribution—one at Monoharpur and Belakoba where the crop suffered the heaviest damage, and the other at the remaining three centres. The West Bengal farms cluster round the lower ranges of yield per acre. The number showing higher output sharply diminishes and very few of them produced jute above 8 maunds per acre. At Purnea, Kendrapara and Nowgong, on the other hand, the concentration of farms is more around the middle of the respective ranges and fewer farms have extreme results. However, the range of yield per acre and its limits appreciably vary from one centre to another. For example, while at Nowgong there was no farm with an yield below 5 maunds per acre (and few below 10 maunds) and one-fourth of them had yield above 18 maunds, very few farms produced jute beyond 10 maunds per acre at Kendrapara and 14 maunds per acre at Purnea. The minimum yield rate at the latter two centres, again, fell below 2 maunds per acre for some of the farms besides some others for whom the production was nil.

Operational cost per maund

Low input would be preferable provided the output is not thereby adversely affected. Rather, a heavier outlay in men and material is far more desirable, if the corresponding output is more than proportionately higher. In the latter case, the cost per unit of yield will be evidently low even with a large input. In order to study this aspect of the problem, we have worked out for individual farms the total input against each maund of fibre produced.

It will be seen from the distribution of farms according to their operational cost per maund given in the next page that most of the farms at Monoharpur and Belakoba had exceedingly high production costs in relation to very poor output. At Nowgong, very good crop was raised but at a fairly high cost. At Purnea and Kendrapara, on the contrary, the yield per acre was far less corresponding to a still lower input which reduced the operational cost per maund of fibre appreciably below that at Nowgong. Though 9 farms at Purnea spent about

Table 15—Cost (Operational) per Maund

Cost (operational) per maund (Rs.)	Number of firms at			Cost (operational) per maund (Rs.)	Number of farms at	
	Monoharpur	Belakoba	Nowgong		Purnea	Kendrapara
Below 14	1	3	7	Below 8	1	3
14-16	...	...	9	8-10	4	7
16-18	1	1	7	10-12	11	7
18-20	1	2	5	12-14	8	5
20-22	...	1	3	14-16	1	3
22-24	...	...	2	16-18	1	...
24-26	...	3	2	18-20	...	3
26-28	1	3	1	20-22	...	3
28 & above	21	20	3	22 & above	9	3
All farms (Wtd. average)	(Rs. 51.15)	(Rs. 37.64)	(Rs. 16.24)	All farms (Wtd. average)	(Rs. 13.49)	(Rs. 11.70)

Rs. 22 per maund of jute produced against 8 farms at Nowgong, the corresponding costs of nearly two-thirds of the farms of the former centre were below Rs. 14 as against only 18% of them at Nowgong. The cost was lower still at Kendrapara with as many as 74% of farms incurring operational expenses between Rs. 6.89 and Rs. 14.69 and only 3 farms above Rs. 22 per maund.

The foregoing analysis suggests that it would be more profitable to grow jute at Purnea and Kendrapara than at Nowgong because, the input in relation to output is much lower at the first two centres than at the last. But it is to be observed that the net return, though small per maund of fibre, may well be substantially large per acre, if the soil has higher productivity as at Nowgong.

Rent

Coming to the last item of cost, it may be seen that the rent, sharing 15.3% of the total cost of jute, declined in 1956-57 by about Rs. 10 per acre as compared to the previous year. This is explained by a comparatively low output at Belakoba and Kendrapara (where the share-croppers predominated) and this reduced the volume of share rent.

The burden of rent was, as usual, the heaviest on the growers of Kendrapara being 36.8% of the production cost, of

which share rent accounted for 35.6%. At Monoharpur, the heavy loss of crop minimised the burden of share rent so much so that it was even less than the cash rent. For the same reason, the share rent at Belakoba which is known to be generally high in normal years, sharply declined in 1956-57 and accounted for only 7.6% of the cost against 28% in 1955-56.

**Input and output in relation
to the size of holdings**

Before we begin the present analysis, it is necessary to point out that the trends in the various items of input and output according to the size of holdings are sometimes not very clear. This is because the unusual circumstances which compelled us to exclude 12 farms from the jute cost study at Monoharpur and also influenced the results at Belakoba, disturbed some of the estimates for the different size groups of farms. Nevertheless, it is possible to discover some broad relationships and arrive at a few conclusions. These will be given in course of our holding-wise analysis.

The average input and output estimates of jute for the five centres taken together, are given according to the size of holdings in Table 16 and Fig 4.

Table 16—Output in relation to Input for Jute

(All centres)

Size of holdings (Acres)	No. of farms (No.)	Operational cost per acre (Rs.)	Yield per acre (Mds.)
0—1.50	17	268.78	10.57
1.51—3.00	41	196.98	10.68
3.01—4.50	37	149.83	7.84
4.51—6.50	42	162.76	8.61
6.51—9.00	26	125.25	8.22
Above 9.00	16	114.02	6.54
All farms	179	152.70	8.45

In spite of some departure shown by one farm group, the trend in respect of input and output is clear, namely, that the

OUTPUT IN RELATION TO INPUT FOR JUTE
(Average for five centres)

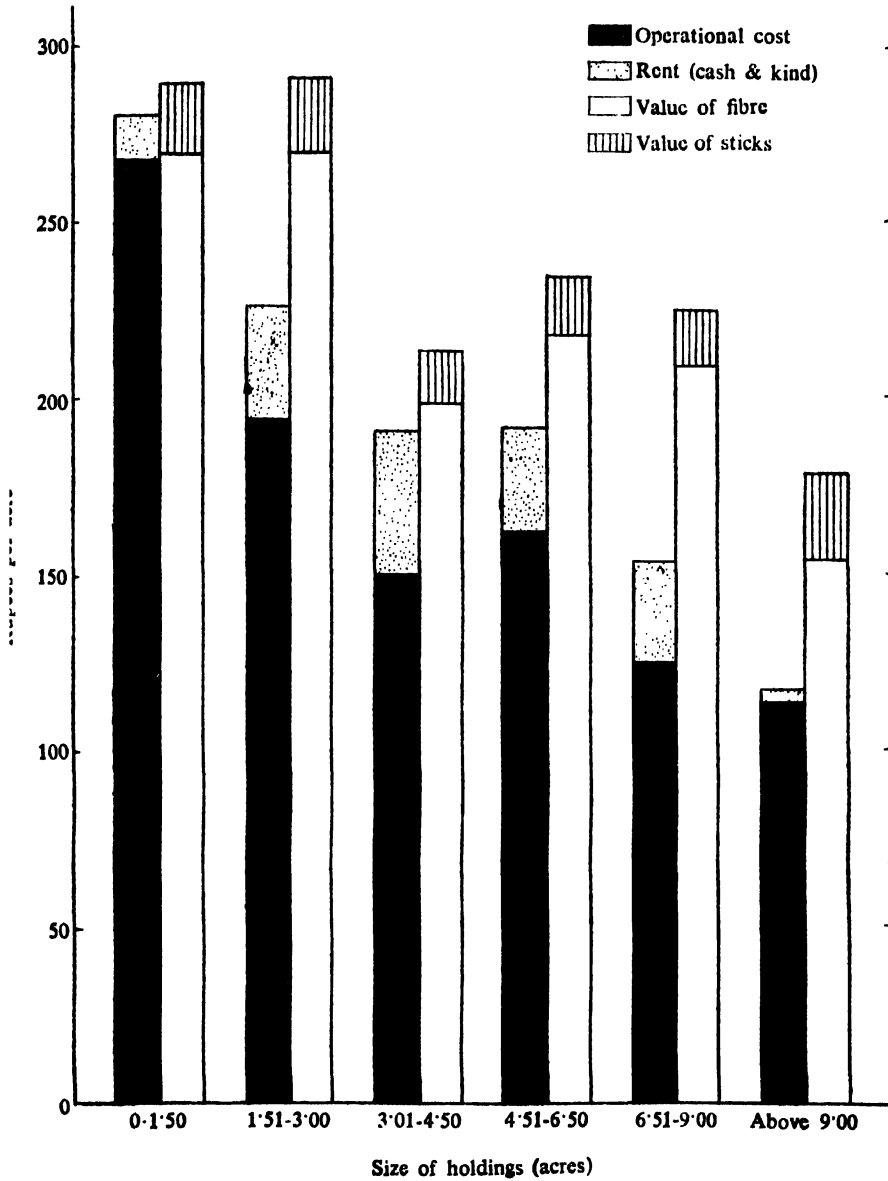


Fig. 4

input or the operational cost per acre decreases and with it the output, as the farm size increases. It may be recalled that this was the finding also of the previous year. Evidently, either the big farmers do not exert themselves as much to increase farm efficiency as the small farmers do or, their resources in labour and capital are not adequate enough in proportion to the farm size for making the necessary outlay. It would thus appear that under the existing conditions, productivity cannot be improved by increasing the farm size. Rather the farming efficiency has a chance to deteriorate (if the present results are any indication) provided other steps are not taken simultaneously to create conditions in which it may be possible for the enlarged farms to increase the input and secure the other advantages enjoyed by the big farms.

A further analysis of the different items of input would show that though the farms in the higher size group have, on an average, more working members than those in the lower group, it was mostly the human labour input that declined as the farm size became larger. The relevant labour estimates are as follows.

Table 17—Labour Resources and their Input in Jute Cultivation
(All centres)

Size of holdings (Acres)	No. of working members per farm* (Adult units)	Human labour input per acre for jute cultivation			No. of draught cattle per farm (Animal units)	Cattle labour input per acre for jute cultivation (Cattledays)
		Total (Mandays)	Hired (Mandays)	Hired as % of total (%)		
0-1.50	1.23	78.30	29.54	37.7	1.00	32.80
1.51-3.00	1.60	75.00	32.15	42.9	1.83	37.78
3.01-4.50	1.93	57.97	20.79	35.9	2.11	42.19
4.51-6.50	2.45	62.51	29.52	47.2	3.12	42.06
6.51-9.00	2.33	58.22	27.78	47.7	3.11	37.19
Above 9.00	2.70	47.03	28.48	60.6	6.06	44.65
All farms	2.04	60.81	27.87	45.8	2.68	40.36

*The figures relate to 179 farms under jute cost study.

It is evident from the table that the number of working units, both human and bullock, generally increases with the size of the farm but the utilisation, particularly of human labour, is not as intensive on the larger farms* as on the smaller ones. The employment of family labour is lesser still for the big farms on which hired labour is engaged in larger proportions thereby requiring higher cash outlay. Cattle labour, on the contrary, finds less intensive use on the smaller farms because they do not have adequate cattle stock. But we have already seen that cattle labour accounts for only one-eighth of the total value of input and is, therefore, far less important than human labour.

Another essential item of input is manure whose intensity of use may be found from the following figures:—

Table 18—Intensity of Manuring
(Maunds per acre)

Size of holdings (Acres)	Average quantity of manure applied on jute plots				
	Monohar- pur	Belakoba	Kendrapara	Nowgong	Average for four centres
0—1·50	31·86	...	16·00	21·48	22·50
1·51—3·00	46·20	68·57	13·25	7·91	15·75
3·01—4·50	37·13	82·39	16·81	4·16	36·96
4·51—6·50	49·95	86·21	22·95	2·39	39·76
6·51—9·00	53·45	84·55	11·00	Nil	29·37
Above 9·00	...	78·40	20·87	...	67·44
All farms	45·81	82·74	15·25	5·20	35·04

Among the four centres where manuring is done for jute, only Monoharpur shows some trend towards more intensive manuring by the bigger than the smaller farms. But the trend is altogether reverse at Nowgong. In any case, there is nothing in general to suggest definitely that the farms in the higher size group are using manure more intensively than their counterpart in the lower group though the production of farm yard manure is more from a larger cattle stock on the former farms. For them, either the available quantity of manure is not properly

* The total input on these farms is higher corresponding to a larger area sown to jute.

preserved and utilised or, it is not adequate in proportion to the total cropped area.

It has been shown earlier that the larger the farm size, the lesser is the input and the corresponding output. But the total cost of production including rent shows a reverse trend because, the smaller farms comprise more of share- than cash-rented land and as such they pay much more rent (in half share of the crop produced) than the amount of cash rent paid by the bigger farms. This can be distinctly seen from the following estimates of cost and profit:—

Table 19—Net Income from Jute

Size of holdings	Cost* per md.	Net profit** per md.	Output per farm	Net profit** per farm
(Acres)	(Rs.)	(Rs.)	(Mds.)	(Rs.)
0—1·50	26·62	0·67	3·49	2·34
1·51—3·00	21·38	5·91	7·14	42·20
3·01—4·50	24·25	3·04	6·73	20·46
4·51—6·50	22·29	5·00	10·67	53·35
6·51—9·00	18·73	8·56	14·67	125·58
Above 9·00	17·98	9·31	10·81	100·64
All farms	21·34	5·95	8·96	53·31

*Including rent in cash and kind

**Including the value of by-product

The reversal of trend in the production cost due to incorporation of rent is so marked that even with decreasing yield per acre, the cost per maund gradually declines and the profit appreciates with the increase in the holding size. Consequently, the low cost combines with higher gross output (from a larger area sown to jute) only to inflate the total profit of the big farms, while it is just the opposite for the small ones. It would thus appear that in the present circumstances, it is not so much the operational efficiency as the fact of land ownership that regulates the ultimate profit and income from jute cultivation. The system of share-cropping, therefore, acts rather as a disincentive to any honest attempt towards increasing the productive efficiency of the farms.

Cash expenses of jute cultivation

Let us now calculate the total cash requirement for jute cultivation in which the growers are more interested. For this purpose it is necessary, first, to determine the proportion of hired to total human labour because the bulk of cash expenditure is accounted for by payment made to this category of labour. Other items like seed, manure and cattle labour, are mostly available on the farm and do not involve much cash cost. The following are the percentages of family and hired labour for man and cattle:—

Table 20—Sources of Labour Supply for Jute Cultivation
(In percentages)

Centre	Human labour		Cattle labour	
	Family	Hired	Family	Hired
Monoharpur ...	64.14	35.86	73.12	26.88
Belakoba ...	97.42	2.58	100.00	...
Purnea ...	27.23	72.77	100.00	...
Kendrapara ...	65.01	34.99	100.00	...
Nowgong ...	42.95	57.05	90.65	9.35
All centres (1956-57)	54.17	45.83	96.82	3.18
All centres (1955-56)	54.22	45.78	99.04	0.96
Share croppers (Belakoba, 1956-57)	98.06	1.94	100.00	...

It is important to note that the average proportion of hired labour remains nearly the same from year to year and centres round about 45%. The relative importance of labour from the two sources, that is, from within and outside the farm, continued roughly to be of the same order also in the individual centres. Only that major crop failure further reduced the percentage of hired to total labour at Belakoba but not at Monoharpur where the input was less in both the categories. The demand for hired labour slightly declined also at Kendrapara and Nowgong.

The cattle labour, it may be seen, belonged mostly to the farm and was hired only in two centres—to the extent of 27%

at Monoharpur and 9% at Nowgong. So the cash expenditure under this head was far less than that on hired human labour.

Secondly, the mode of wage payment, *i.e.*, in cash or in kind, determines the cash money involved in jute cultivation. The actual expenses of the selected growers are given below.

Table 21—Hired Human Labour Cost in Cash and Kind

Centre	Cash		Kind		Total	
	Rs. per acre	%	Rs. per acre	%	Rs. per acre	%
Monoharpur ...	63·27	100·00	...	...	63·27	100·00
Belakoba ...	1·82	93·81	0·12	6·19	1·94	100·00
Purnea ...	35·25	49·63	35·78	50·37	71·03	100·00
Kendrapara ...	14·91	77·13	4·42	22·87	19·33	100·00
Nowgong ...	102·61	76·28	31·90	23·72	134·51	100·00
All centres (1956-57)	41·62	70·49	17·42	29·51	59·04	100·00
All centres (1955-56)	46·83	75·80	14·95	24·20	61·78	100·00

Except at Purnea and Nowgong where about a third of the wage bill was paid in kind* according to the local custom, the entire payment was made in cash. Therefore, other conditions remaining the same, the jute growers of Monoharpur, Belakoba and Kendrapara would require more cash money than their counterpart at the other two centres.

Having dealt with the different factors which regulate the cash outlay, the estimates of total cash requirement for jute cultivation may now be made. Table 22 on page 31 gives the relevant figures. Under the conditions prevailing in 1956-57, both farm and paid costs declined, their proportions remaining nearly the same as in 1955-56. Thus about two-fifths of the total operational cost had to be paid for, of which nearly 11% was in cash and 30% in kind. Reduced to a per acre basis,

*Stripping is paid for in a portion of fibre at Purnea while meals are supplied in addition to cash wages at Nowgong for all the operations.

Table 22—Analysis of Operational Cost

Centre	Per farm						Per acre						Proportion to total								
	Farm			Paid			Cash			Paid			Total		Total		Paid		Total		
	Rs.			Rs.			Rs.			Rs.			Rs.			Rs.		Rs.		%	
	Rs.	Rs.	Rs.	Kind	Rs.	Total	Rs.	Kind	Rs.	Total	Rs.	Kind	Rs.	Total	Rs.	Kind	Rs.	Total	Rs.	Total	
Monoharpur	...	50.94	26.02	...	26.02	76.96	142.52	...	72.81	215.33	66.19	33.81	100.00	...	...	...	...	...	...	...
Belakoba	...	158.02	6.66	0.14	6.80	164.82	135.87	0.12	5.73	141.72	95.87	4.13	100.00	...	...	...	...	...	...	...
Purnea	...	40.92	38.60	38.99	77.59	118.51	37.54	35.78	35.42	108.74	34.53	65.47	100.00	...	...	...	...	...	...	...
Kendrapara	...	59.16	21.54	5.12	26.66	85.82	51.02	4.42	18.58	74.02	68.93	31.07	100.00	...	...	...	...	...	...	...
Nowgong	...	147.41	138.03	40.82	178.85	326.26	115.19	31.90	107.85	254.94	45.18	54.82	100.00	...	...	...	...	...	...	...
All centres (1956-57)	...	95.35	47.94	18.45	66.39	161.74	90.02	17.42	45.26	152.70	58.95	41.05	100.00	...	...	...	...	...	...	...
All centres (1955-56)	...	115.54	58.18	17.37	75.55	191.09	99.46	14.95	50.08	164.49	60.46	39.54	100.00	...	...	...	...	...	...	...
Shore croppers (Belakoba, 1956-57)	...	135.06	2.22	...	2.22	137.28	135.28	2.22	...	137.50	98.39	1.61	100.00	...	...	...	...	...	...	...

the average cash outlay worked out at Rs. 45. The average grower producing jute on 1.16 acre*, required Rs. 48 in cash alone for jute. The corresponding estimates, taking into account the cash rent, came to more than Rs. 50 per acre and Rs. 53 per farm. As compared to the smaller farms, however, the total cash requirement is obviously more for the bigger farms on which a larger proportion of labour is hired and paid for in cash.

Comparative position of the high- and low-yielding farms

Before we close our discussion on jute, it will be quite useful to examine why some farms have higher productivity than the others. Such an analysis would help discover the means by which it might be possible to improve farm efficiency in respect of jute. For this purpose, we have chosen the farms falling in the highest and lowest ranges of yield per acre (as shown in Table 14**) and have worked out for each of the two groups of farms the average estimates under different items of input. A comparison of these estimates as given in Table 23 on page 33, would suggest the following broad conclusions:-

- (i) Though weather and soil fertility exert considerable influence on the yield of jute, there are also other contributory factors regulating the output.
- (ii) The high-yielding farms have generally smaller area under total cultivation or under jute which can be efficiently managed. It is because of this that more care can be taken (with limited resources) of a crop like jute whose cultivation is both labour and capital intensive.
- (iii) The total input in labour and material, particularly of human labour and manure, is much more on the high- than on the low-yielding farms. More care by way of soil preparation and interculture naturally requires

*The acreage estimate is based on all the farms sowing jute (except 12 farms at Monoharpur not included in the cost study).

**The highest range is taken at Monoharpur as above 8 mds. and the lowest range at Nowgong below 8 mds. per acre.

Table 23—Average Estimates of Input and Output on the High- and Low-Yielding Farms

Estimates	Unit	Monoharpur		Belakoba		Purnea		Kendrapara		Nowgong	
		High-yielding farms	Low-yielding farms	High-yielding farms	Low-yielding farms	High-yielding farms	Low-yielding farms	High-yielding farms	Low-yielding farms	High-yielding farms	Low-yielding farms
1. Yield per acre ...	Mds.	12.34	1.28	13.19	1.25	16.51	0.84	10.86	0.71	22.60	5.80
2. Operational cost per acre ...	Rs.	248.71	170.28	178.29	129.42	130.85	57.44	85.46	36.02	315.42	160.55
3. Paid cost per acre ...	Rs.	45.81	18.97	13.39	6.43	92.49	31.91	26.74	14.66	170.06	76.88
4. Paid cost as % of operational cost ...	%	18.42	11.14	7.51	4.96	70.69	55.55	31.29	40.69	53.91	47.83
5. Per acre input of human labour :											
(a) All operations (total) ...	Mandays	89.72	60.23	81.94	35.06	81.03	34.77	52.67	21.23	104.63	56.36
(b) Pre-harvesting operations only ...	"	47.19	42.84	36.49	30.36	42.99	27.87	24.93	16.96	56.80	29.34
(c) Weeding only ...	"	29.98	28.37	15.50	10.18	26.01	11.98	12.88	6.66	38.28	17.00
(d) Total hired labour ...	"	11.57	7.82	3.14	0.99	70.74	28.04	15.84	14.84	59.71	26.43
6. Human labour input per md. of output (harvesting and post-harvesting operations only)	"	3.45	13.59	3.45	3.77	2.30	8.20	2.55	6.02	2.12	4.66
7. Input of cattle labour (per acre)	Cattledays	19.22	19.20	55.20	52.74	44.86	34.07	24.66	23.20	49.84	35.19
8. Quantity of manure (per acre)	Mds.	50.00	30.07	90.00	79.40	...	...	11.32	4.61	14.53	...

a larger volume of labour. Fibre preparation also involves higher labour cost but not in proportion to a much better output on the high-yielding farms.

- (iv) Corresponding to more labour input, the amount of hired labour (and its proportion to total) is also larger on the high- as compared to that on the low-yielding farms. So the former have to make more cash investment for efficient jute cultivation than the latter farms.
- (v) Higher input with a still higher output reduces the unit cost of jute produced on the high-yielding farms. Consequently, they earn much more profit and income (because the aggregate output of such farms is also larger) than those accruing to the low-yielding farms.

Summary

The observations made from the cost study on jute in 1956-57 are summarised below.

- (a) The weather was much unfavourable to jute in all but one of the selected centres and it adversely affected the yield of the crop.
- (b) The cost of jute cultivation generally increased due almost entirely to low output. The total input per acre was less but not in proportion to the reduced yield.
- (c) The technique of jute cultivation remained as primitive as before. Only the seed rate tended to decline and some improvement was noticeable in the use of manure on jute plots. This is perhaps the effect of continuous demonstration of the improved methods of jute cultivation over a number of years.
- (d) In the changed pattern of cost distribution manure assumed more importance than in the past few years of investigation.

- (c) The wage rates after a long period of stability, showed slight increase for which the rising prices of rice might be responsible.
- (f) With the cost of production, the price of jute also appreciated in 1956-57. So the grower's position from the profit point of view was not, on the whole, worse in that year as compared with 1955-56.
- (g) The larger the holding size, the smaller is the input per acre and so also is the resultant output. The total production cost, however, shows a reverse trend due to the inclusion of rent which is usually higher for the small farms as they have more share than cash-rented land. Therefore, the net profit on jute ultimately increases as the farm size becomes larger.
- (h) Some of the farms higher yield per acre than the others and as such they earn more income from jute. The high-yielding farms no doubt require a larger input in labour and material which involves a higher cash outlay, but the corresponding output is also more than proportionately higher as compared to that on the low-yielding farms.

III. REPORT ON PADDY

For more than one reason, the study of the economics of jute growing will not be complete without a detailed study of the economics of paddy cultivation. First, the two crops compete with each other on the cultivators' farms in the important jute growing areas; secondly, the agro-economic problems of the crops are closely inter-related; and thirdly, paddy occupies a position even more predominant than jute in the economy of the jute growers. Therefore, the cost of paddy production and the other allied problems are almost equally important items of investigation as those for jute itself. All the plots* sown to paddy by our selected farmers were covered except at Kendrapara. There the number of such plots being too large, the survey was confined to a sub-sample of paddy plots.

Area under paddy

Adverse weather at sowing time in the beginning of the season affected generally the sowings of the earlier varieties of paddy like *aus* and broadcast *aman*, but not much of transplanted *aman* which is sown late. This is indicated by the average estimates of area per farm sown to both the early and late varieties of paddy by our selected growers. These are given below.

Table 24—Area under Different Varieties of Paddy
(Acre per farm)

Centre	Aus	Aus-aman	Bd. aman	Tr. aman	All varieties (1956-57)	Jute (1956-57)	All varieties of paddy (1955-56)
Monoharpur ...	...	...	0.05	1.99	2.04	0.95	2.12
Belakoba ...	0.60	...	0.50	3.61	4.71	1.29	4.88
Purnea ...	1.05	0.06	0.06	1.12	2.29	1.18	3.00
Kendrapara ...	0.03	...	1.35	2.83	4.21	1.32	4.05
Nowgong ...	0.58	0.32	0.22	0.98	2.10	1.35	2.23
All centres (1956-57) ...	0.46	0.08	0.43	2.12	3.09	1.22	...
All centres (1955-56) ...	0.58	0.05	0.64	2.03	...	1.25	3.30

Bd. = Broadcast

Tr. = Transplanted

*The cost enquiry covered altogether 1142 paddy plots distributed over the five centres. As in the case of jute, 7 farms on which paddy could not be sown at all, have been excluded from the scope of the present analysis but they have been included for the purpose of the family budget study.

Paddy sowings were less in 1956-57 as compared to the previous year at Purnea and Nowgong except for the combined crop *aus-aman* at the latter centre. Generally speaking, the weather was equally bad or good for paddy and jute at both these centres, i.e., unfavourable at Purnea and favourable, though not as much for paddy as for jute, at Nowgong. In the other centres except Monoharpur, the initial bad weather changed for the better late in the season in which transplantation was done satisfactorily and the plants thrived fairly well. But the early paddy, as we shall have occasion to see later, did not fare much better than jute.

That 1956-57 was on the whole a bad year for agriculture in the selected centres, is fairly indicated by an almost equal percentage fall in the average area per farm under the two major crops, namely, jute and paddy. Some good performance by transplanted *aman* (though not quite so at Monoharpur and Purnea) was the only redeeming feature in an otherwise gloomy farming situation with the exception, of course, of Nowgong.

This being the condition in which paddy was cultivated in 1956-57, let us see whether this or any other factor had any effect on the cost structure of that crop.

Cost structure

The distribution of total operational cost over the four items of input are given below both centre-wise for all the varieties of paddy taken together and variety-wise for all the centres combined.

Table 25(a)—Percentage Distribution of Operational Cost of Paddy Cultivation
(All varieties)

Centre	Human labour	Cattle labour	Seed	Manure
Monoharpur	74.44	14.28	10.65	0.63
Belakoba	53.59	22.13	24.28	...
Purnea	62.08	20.49	17.43	...
Kendrapara	75.65	8.56	11.05	4.74
Nowgong	71.46	19.36	9.18	...
Paddy : All centres (1956-57)	66.17	18.07	15.12	0.64
Jute : All centres (1956-57)	75.17	12.49	3.39	8.95
Paddy : All centres (1955-56)	67.24	17.89	14.12	0.75

*Table 25(b)—Percentage Distribution of Operational Cost
in each Variety of Paddy*

(All centres)

Variety of paddy	Human labour	Cattle labour	Seed	Manure
Aus ...	64.17	24.10	11.69	0.04
Aus-aman ...	68.14	21.33	10.53	...
Broadcast aman ...	67.07	18.67	14.15	0.11
Transplanted aman ...	66.50	16.02	16.56	0.92
All varieties ...	66.17	18.07	15.12	0.64

With about two-thirds of the operational cost accounted for by human labour and practically the rest by cattle labour and seed in nearly equal proportions, the cost structure did not deviate materially from what was observed in the past years. Not only the overall pattern but also the percentage costs on the individual items for each of the centres as well as for the different varieties of paddy remained practically unchanged. The more striking feature, in contrast to jute, was the relative unimportance of manure for paddy cultivation. Instead of the expected gradual improvement, the position rather deteriorated because manure was used in none of the investigation centres except Kendrapara and Monoharpur, and there too the intensity of manuring which is usually done on the *aman* plots, was less than in the year before.

Human and cattle labour

The estimates of the input of human labour are given below in terms of mandays per acre, a manday being defined in the same way as in the case of jute.

Table 26—Mandays per Acre

Centre	Aus	Aus-aman	Bd. aman	Tr. aman	All varieties (1956-57)	Jute (1956-57)	All varieties of paddy (1955-56)
Monoharpur ...	...	...	36.39	42.52	42.38	81.03	56.09
Belakoba ...	23.70	...	16.12	28.49	26.57	42.31	24.89
Purnea ...	42.19	49.62	32.07	36.22	39.23	57.47	37.67
Kendrapara ...	43.62	...	44.15	48.48	47.06	49.15	47.79
Nowgong ...	46.96	53.45	23.59	39.12	41.84	87.04	38.83
All centres (1956-57)	38.18	52.78	29.54	36.11	36.26	60.81	...
All centres (1955-56)	37.18	59.29	35.73	36.46	...	75.76	36.88

It would be seen that labour consumption was higher or lower in this or that variety in 1956-57 as compared to 1955-56 depending upon the circumstances under which paddy was produced. But the average worked out at 36 mandays per acre fluctuating little from the corresponding estimates of the previous years. This was also more or less true for the individual centres. It is, however, interesting to note that the overall labour input for paddy cultivation was found to vary within very small limits—not outside the range of 36 to 40 mandays per acre ever since we began the investigation. But in case of jute, the range of variation from one year to another is far more wide.

Sharp fall in labour input in 1956-57 in jute against an equal level of labour consumption maintained by paddy, perceptibly narrowed down the gap in the volume of man power employed for the two crops in that year. Nevertheless, the fact remains and it is significant that jute cultivation is much more labour-intensive than paddy cultivation. Not only the total amount of human labour but its proportional cost as well is higher for jute than paddy. Obviously, this imposes a limitation on jute cultivation for which the supply position of labour must remain easy.

A further analysis of labour made below would indicate the spheres where the input is higher and its effect on the output.

Table 27—Human Labour Input in Paddy and Jute Cultivation*

(Mandays per acre)

Centre	Soil preparation, manuring and sowing		Weeding		Harvesting & post-harvesting		Total for all operations	
	Paddy	Jute	Paddy	Jute	Paddy	Jute	Paddy	Jute
Monoharpur ...	19·60	15·60	6·18	37·03	16·60	28·40	42·38	81·03
Belakoba ...	16·86	20·40	0·19	13·44	9·52	8·47	26·57	42·31
Purnea ...	20·83	16·18	7·60	16·02	10·80	25·27	39·23	57·47
Kendrapara ...	14·91	11·56	10·66	14·43	21·49	23·16	47·06	49·15
Nowgong ...	17·57	15·01	5·10	30·41	19·17	41·62	41·84	87·04
All centres ...	17·84	15·87	4·54	19·81	13·88	25·13	36·26	60·81
% to total ...	49·20	26·10	12·52	32·58	38·28	41·32	100·00	100·00

* Combined for all varieties

The above analysis shows that excepting at Belakoba, soil preparation and sowing taken together required a greater amount of labour for paddy than for jute. It was mostly in manuring, weeding and the rest of the operations that jute consumed much more labour than paddy. Of these, however, the cost of harvesting is largely determined by the number of plant stands and the manner of their growth. Post-harvesting operations, on the other hand, are by their nature complicated and labour-consuming in case of jute as it is partly with transplantation of *aman* paddy. Therefore, allowing for these factors, it will be seen that those operations in particular (*i.e.*, manuring and interculture) which are known to improve the crop yield, are given more care and attention in case of jute than paddy. Of course, ploughing is as intensive on the one crop as on the other.

Turning next to weeding, it may be noted that on an average only 4½ mandays per acre were spent on paddy interculture as compared to 20 mandays for jute. So, while interculture accounted for consumption of only 12.5% (nearly the same as in the year before) of the total labour input, the corresponding percentage for jute, employing a considerably larger volume of labour, was as high as 33. Reduced to money value, weeding shared only 8% of the total operational cost of paddy. The operation received some good attention generally in *aus* (except at Belakoba) and broadcast *aman* as also in the combined variety of *aus-aman* at Purnea.

But for a much greater utilisation of bullock power in jute than in paddy at Belakoba, its average input per acre would not have been substantially different for the two crops. This can be seen from the comparative estimates of cattle labour given in Table 28 on page 41.

The average input of cattle labour for paddy remained virtually the same as in the year before and was less than the corresponding input for jute by only 7 cattledays per acre. At Belakoba where bullock labour is more liberally employed, its use was far more intensive in jute as compared to paddy. The other centres, on the contrary and especially Monoharpur, utilised nearly equal volume of cattle labour for the two crops.

Table 28—Cattledays per Acre

Centre	Aus	Aus-aman	Bd. aman	Tr. aman	All varieties (1956-57)	Jute (1956-57)	All varieties of paddy (1955-56)
Monoharpur	...	...	16.55	18.87	18.90	18.98	21.01
Belakoba	51.28	...	27.58	32.55	34.44	53.96	33.75
Purnea	49.57	47.04	46.23	33.63	41.65	45.26	41.48
Kendrapara	17.03	...	20.48	19.99	20.94	22.38	21.11
Nowgong	56.12	60.90	33.20	35.33	44.73	42.35	40.74
All centres (1956-57)	51.55	58.49	28.49	27.13	33.27	40.36	...
All centres (1955-56)	51.21	59.78	26.98	28.19	...	39.01	33.24

Seed and manure

Paddy seed and seedlings involved considerably higher cost per acre and so they shared, as we have shown before, a larger proportion of total operational cost than jute seeds. The expenditure on paddy seeds including seedlings was calculated at Rs. 13.76 per acre in 1956-57 against Rs. 13.31 in the preceding year. This, in both the years, was more than two and a half times the corresponding cost of jute seed which in 1956-57 came to only Rs. 5.17 per acre.

We know that manuring receives the least amount of care so far as paddy is concerned. Of the five centres, it was done at Kendrapara and only for transplanted *aman* at Monoharpur. The position in this regard seems to have deteriorated in the season under report. On the one hand, the average quantity of manure used for paddy declined at these two centres and on the other, contrary to usual practice, the selected farmers of Belakoba and Nowgong did not apply any manure for that crop. Consequently, the overall average declined to 1.06 maund per acre valued at Rs. 0.59 in contrast to a rise in the quantity applied to jute which worked out at 28 maunds per acre valued

at Rs. 13.67. Evidently, proper manuring would have gone a long way in improving the output of paddy. This is somewhat indicated by the fact that among the five centres manuring was done to some appreciable extent only at Kendrapara and it was there that the per acre yield of paddy was the maximum.

Operational cost

Before giving the operational cost, it is necessary to see how the wage rates for paddy cultivation differed from those for jute, and its effect on the money value of the labour input. The average rates at which labour was paid, are quoted below for paddy and jute.

*Table 29—Comparative Wage Rates
for Paddy and Jute*

(Rupees per manday)

Centre	Paddy	Jute
Monoharpur ...	2.20	2.15
Belakoba ...	1.28	1.58
Purnea ...	1.34	1.53
Kendrapara ...	1.23	1.00
Nowgong ...	2.46	2.56
All centres ...	1.66	1.89

It will be seen that the average wage rates for the two crops varied from centre to centre. The seasonal fluctuation combined with the size of labour employed in each season for one crop or the other, caused this variation. After weighing the wage rates according to the volume of labour input at different rates, the overall average is found to be a little higher for jute than paddy. From this we would expect a somewhat higher ratio between the money equivalent of input than what was given by the relative amount of physical labour employed in jute and paddy. But this was not so because, manure and cattle labour involved comparatively higher cost for jute than paddy. This is

shown by the following estimates of total operational cost :—

Table 30—Operational Cost of Paddy
(Rupees per acre)

Centre	Aus	Aus-aman	Bd. aman	Tr. aman	All varieties (1956-57)	Jute (1956-57)	All varieties of paddy (1955-56)
Monoharpur	...	...	108.37	125.75	125.34	215.33	158.58
Belakoba ...	72.66	...	41.68	65.16	63.65	141.72	73.28
Purnea ...	82.96	98.13	73.81	86.33	84.78	108.74	79.33
Kendrapara ...	67.05	...	67.66	80.69	76.43	74.02	69.65
Nowgong ...	169.50	177.56	83.70	131.38	143.96	254.94	126.85
All centres (1956-57)	101.62	163.65	61.90	89.79	91.03	152.70	...
All centres (1955-56)	96.14	142.50	82.20	95.55	...	164.49	94.22

A comparison of the cost estimates of paddy between the years 1955-56 and 1956-57 would show that the average operational cost slightly declined in the latter year mainly due to sizeable reduction in the total input per acre in the two West Bengal centres. Otherwise, the cost per acre went up at the three other centres for almost all the varieties of paddy. This, however, is partly accounted for by better output of both *aus* and *aman* particularly at Kendrapara and Nowgong, as very low yield explains the sharp fall in the operational expenses at Monoharpur.

Yield per acre

It will be evident from the description of weather given in the report on jute that the earlier crops, whether jute or paddy, suffered alike in the centres visited by drought or excessive rains. The variety-wise estimates of average yield per acre will show this.

Table 31—Yield of Paddy
(Maunds per acre)

Centre	Aus	Aus-aman	Bd. aman	Tr. aman	All varieties (1956-57)	Jute (1956-57)	All varieties of paddy (1955-56)
Monoharpur	...	...	7.40	10.46	10.39	4.21	17.78
Belakoba ...	6.43	...	8.92	15.70	13.79	3.77	11.44
Purnea ...	6.14	10.73	8.12	8.70	7.57	8.06	8.87
Kendrapara ...	8.78	...	18.93	16.82	17.45	6.33	13.96
Nowgong ...	12.17	20.95	10.55	13.55	13.97	15.70	12.25
All centres (1956-57)	7.74	19.17	12.97	13.61	12.67	8.45	...
All centres (1955-56)	9.47	17.52	12.89	12.74	...	10.17	12.18

In contrast to jute, paddy witnessed a quite favourable weather at Kendrapara after a year of devastating flood causing heavy damage to that important food crop. At Belakoba, too, the weather considerably improved later in the season only to help transplantation of *aman*. But at Monoharpur, paddy suffered substantial loss due to thick weeds, stem rot and flood though the damage was not so serious as in the case of jute. The condition was, however, more discouraging at Purnea with drought in the early season and excessive rains later. This reduced the yield of all the varieties of paddy; only broadcast *aman* fared somewhat better than a year ago. Lastly, good weather at Nowgong largely accounted for better yield of both *aus* and transplanted *aman* than in 1955-56, while the other two varieties which initially thrived well, were adversely affected by sudden rise of flood water.

On the whole, very good output of *aman* paddy at Kendrapara, and of transplanted *aman* at Belakoba and Nowgong increased the average yield per acre by a little over half a maund from the corresponding figure in 1955-56. The year 1956-57 was generally favourable to paddy than jute so much so that despite better manuring and interculture, the average yield per acre of the latter crop was as low as 8.45 maunds against 12.67 maunds for paddy. Nowgong and Purnea were the only two centres where jute had a better record of yield than paddy.

Rent

In our sample, one-third of the paddy area under cost study, i.e., the same proportion as in the year before, was cultivated on share-cropping system and this was somewhat higher than the corresponding proportion for jute. The average rent per acre for paddy, as we shall shortly see, somewhat increased in 1956-57. This was due, on the one hand, to higher paddy prices and on the other, to better output especially at Belakoba and Kendrapara where the share-croppers predominated*. Of the total rent, therefore, which accounted for 23% of the production cost (against 15% in case of jute), cash rent was 2.4% and share rent as high as 20.6%.

*Monoharpur had also a fairly high percentage (36%) of paddy land under share crop. So, with a lower paddy output, the average rent at that centre appreciably declined in 1956-67.

We know that it is largely the incidence of share rent that causes variation in the average rent between the crops. Jute generally carries a substantially higher burden of rent because the value of the share crop having a higher price is much more than that of paddy. In 1956-57, however, the two crops had practically equal rent per acre on an average in spite of the price differential. This is explained by a sizeable fall in the output and hence in the volume of share crop in case of jute against an increase in case of paddy. This is easily shown by the per acre value of share rent which, for the share-rented plots, worked out at Rs. 75 per acre for both jute and paddy.

Cost of production

After analysing the different components of cost separately for the four varieties, the combined cost of paddy production is given below and in Fig. 5.

Table 32 Average Cost of Production of Paddy
(Combined for all varieties)

Centre	Operational cost per acre	Rent* per acre	Total cost per acre	Yield per acre	Cost per md. (1956-57)	Cost per md. (1955-56)	Cost per md. of jute (1956-57)
	(Rs.)	(Rs.)	(Rs.)	(Mds.)	(Rs.)	(Rs.)	(Rs.)
Monoharpur	125.34	30.93	156.27	10.39	15.04	11.53	54.56
Belakoba	63.65	34.97	98.62	13.79	7.15	8.47	41.00
Purnea	84.78	5.98	90.76	7.57	11.99	9.82	16.12
Kendrapara	76.43	33.94	110.37	17.45	6.32	6.54	18.50
Nowgong	143.96	22.73	166.69	13.97	11.93	11.64	18.54
All centres (1956-57)	91.03	27.13	118.16	12.67	9.33	...	21.34
All centres (1955-56)	94.22	21.95	116.17	12.18	...	9.54	19.86

*In cash and kind

As already stated, the total cost per acre slightly increased in 1956-57 because of rent. A little higher yield but not as much higher cost per acre than in the previous year reduced the average cost per maund of paddy very slightly from Rs. 9.54 to Rs. 9.33. It is significant that since 1954-55, almost the same

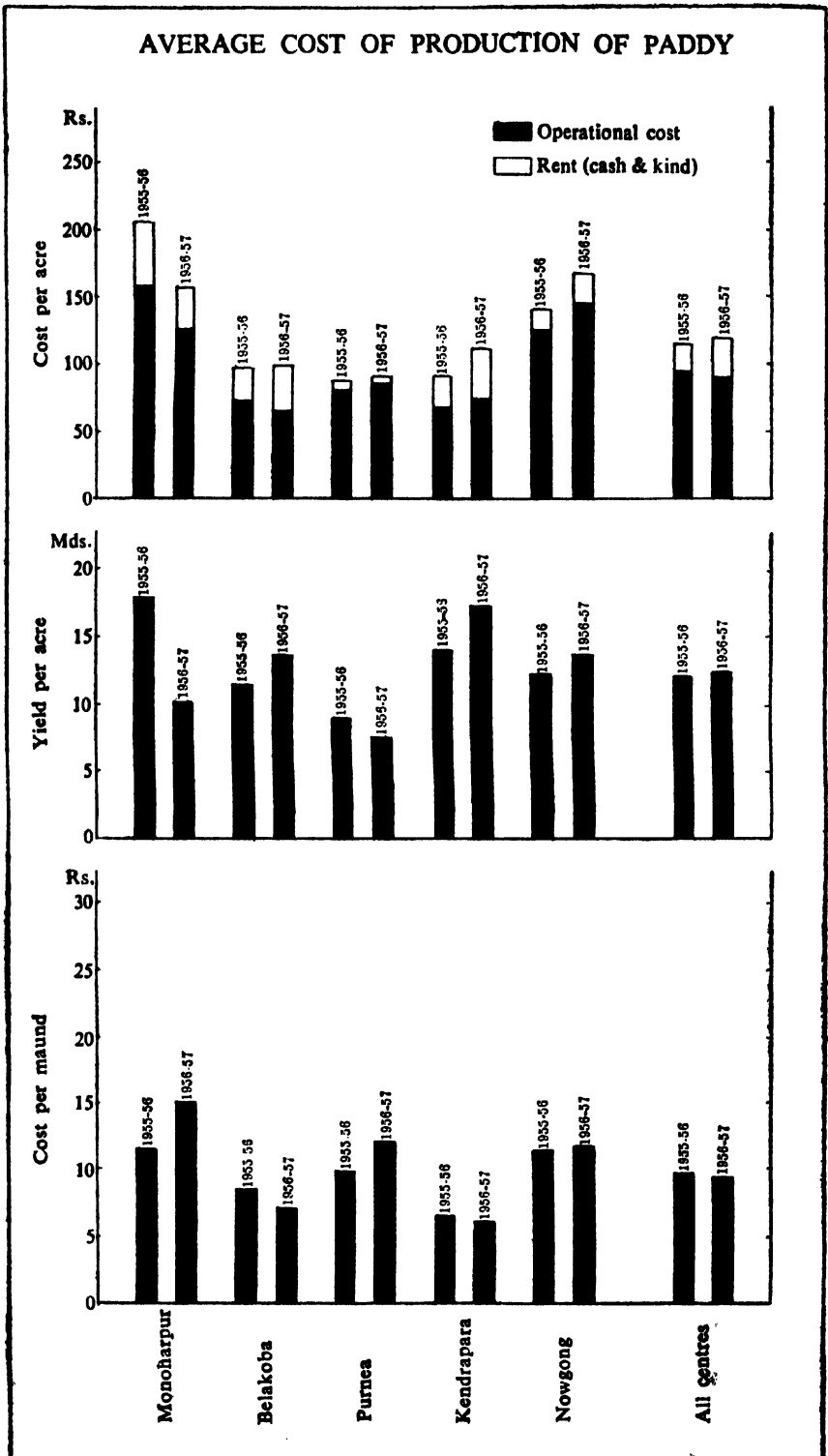


Fig. 5

cost round about Rs. 9.50 is being incurred for producing one maund of paddy. The increase in jute cost, on the other hand, altered its ratio to paddy cost in favour of the latter crop in 1956-57 as compared to the two earlier years.

Coming to the individual centres, it would be seen that the growers of Monoharpur were the worst sufferers also in respect of paddy. Its cost of production was the highest among the five centres because, though the input was low, the output was lower still. The cost increased to a much lesser extent also at Purnea, and only slightly at Nowgong even with a better yield than in the foregoing year.

Profit and loss and income from paddy

Table 33 on page 48 gives the profit and loss account of paddy for the year 1956-57.

The fact that readily attracts one's attention is an appreciable rise in the prices of paddy in all the centres. An overall increase from Rs. 9 per maund in 1955-56 to more than Rs. 11 in 1956-57 can be said to be quite substantial. Even with the minimum rise at Monoharpur, the paddy price there continued to be the highest among the five centres as before. Still, so high was the cost at Monoharpur that paddy cultivation would not have been profitable had not straw, which is known to have a good sale value, brought in fairly decent sum to the farmers. It was due to this that instead of incurring loss, they earned some income on paddy which cannot be regarded as quite small. Similarly, the value of straw, if taken as an additional income, just recoups the loss at Purnea, and Nowgong, while the average grower at Kendrapara and Belakoba earned substantial margin of profit because of very low cost of production.

The average profit and income from paddy was much better in 1956-57 than in 1955-56 as the comparative accounts of the two years would reveal. The profit was, however, somewhat less per maund of paddy than jute obviously due to lower price in relation to production cost of the former crop as against the latter. But a much larger gross output of paddy per farm combined with greater contribution of family labour to inflate the total income of the average grower from paddy considerably above that from jute.

Table 53—Profit and Loss Account of Paddy

Centre	Average price per maund (Rs.)	Average cost per maund (Rs.)	Profit (-) or loss (-) per maund (Rs.)	Value of straw per maund of paddy (Rs.)	Net profit (+) or loss (-) per maund (Rs.)	Output per farm (Mds.)
Monoharpur	12.38	15.40	(-) 2.66	5.18	(+) 2.52	21.70
Belakoba	11.06	7.15	(+) 3.91	0.66	(-) 4.57	64.94
Purnea	11.56	11.99	(-) 0.43	0.50	(+) 0.07	17.36
Kendrapara	8.63	6.32	(-) 2.31	1.53	(+) 3.84	67.01*
Nowgong	12.25	11.93	(+) 0.32	0.80	(+) 0.48 1/2	29.29
All centres (1956-57)	11.31	9.33	(+) 1.98	1.38	(+) 3.36	40.20
All centres (1955-56)	9.02	9.54	(-) 0.52	1.43	(-) 0.91	41.87

Centre	Net profit (+) or loss (-) per farm (Rs.)	Value of family labour Per farm (Rs.)	Net income (+) or loss (-) per farm (Rs.)	Net profit (+) or loss (-) in 1955-56 Per maund (Rs.)	Per farm (Rs.)
Monoharpur	(-) 53.34	128.55	(+) 181.89	(-) 3.54	(+) 133.49
Belakoba	(+) 297.84	158.32	(-) 456.16	(+) 0.84	(-) 46.55
Purnea	(-) 1.05	27.87	(+) 28.92	(-) 0.60	(-) 16.12
Kendrapara	(+) 257.32	102.23	(+) 359.55	(+) 1.90	(+) 116.11
Nowgong	(+) 32.67	82.96	(+) 115.63	(-) 1.77	(-) 48.28
All centres (1956-57)	(+) 135.07	100.37	(-) 235.44	...	...
All centres (1955-56)	(+) 38.10	126.71	(-) 164.81	(+) 0.91	(+) 38.10

*For all plots including the sample plots

Finally, it is important to note that jute continued to earn more profit per unit of output than paddy. But the increase in the cost ratio and decrease in the price ratio of jute to paddy between 1955-56 and 1956-57 obviously reduced the margin of comparative profits from them. This, however, worsened the position of the jute growers in the latter year as purchasers of paddy.

Input and output in relation to the size of holdings for paddy

Before summarising the comparative position of jute and paddy, it would be worthwhile to study, as we have done in case of jute, the variation in the input for and output of paddy with the change in the size of holdings. Some of the important estimates of input and the corresponding output of paddy, taking all the centres and varieties together, are given in Table 34 on page 50 and in Fig. 6.

The input or operational cost per acre steadily declines with the increase in the size of holdings—a trend similar to that noticed for jute. Of the total input, human labour is more important and follows nearly the same pattern as the total cost. The cattle labour input, on the contrary, shows more or less a reverse trend for reasons already explained while dealing with jute. The effect of input on output, however, does not appear to be very clear. The yield per acre is both high and low irrespective of the input. For some of the explanations of this peculiar behaviour of the output estimates, we may refer back to certain portions of the analysis given in the earlier pages.

In the first place, weather had much more effect than any other factor on *aus* paddy whose output, as compared with the output of the other varieties, was the lowest corresponding to the highest input. Secondly, the operations like manuring and interculture which are known to influence the crop yield and larger input on which is likely to increase the output, were found to be relatively much less important for paddy. But the input on those two operations and the resultant output in relation to the holding size showed a rather reverse trend at Monoharpur and Kendrapara where these operations received some care.

Table 31—Input and Output in relation to the Size of Holdings
(Combined for all the varieties of paddy and all the centres)

Size of holdings	Area under paddy per farm	Operational cost per acre	Yield per acre	Cost* per maund	Profit (+) or loss (-) per maund**	Output of paddy per farm	Net profit (+) or loss (-) per farm	Human labour input per acre	Cattle labour input per acre
(Acres)	(Acres)	(Rs.)	(Mds.)	(Rs.)	(Rs.)	(Mds.)	(Rs.)	(Mandays)	(Cattledays)
0-1.50	0.61	132.70	11.54	15.54	(-) 2.85	7.37	(-) 21.00	41.64	28.84
1.51-3.00	1.66	118.67	12.21	12.05	(+) 0.64	20.78	(+) 13.30	41.84	32.20
3.01-4.50	2.98	98.00	13.44	10.51	(+) 2.18	40.02	(-) 87.24	36.98	35.08
4.51-6.50	3.79	88.06	11.93	9.78	(+) 2.91	46.62	(+) 135.66	34.12	33.73
6.51-9.00	4.90	80.02	13.46	7.30	(+) 5.39	67.72	(+) 365.01	36.46	29.78
Above 9.00	5.41	72.21	12.82	6.49	(+) 6.20	70.51	(+) 437.16	33.82	35.48
All farms	3.03	91.03	12.67	9.33	(+) 3.36	40.20	(+) 135.07	36.26	33.27

*Including rent in cash and kind

** Including the value of straw

OUTPUT IN RELATION TO INPUT FOR PADDY (Average for five centres)

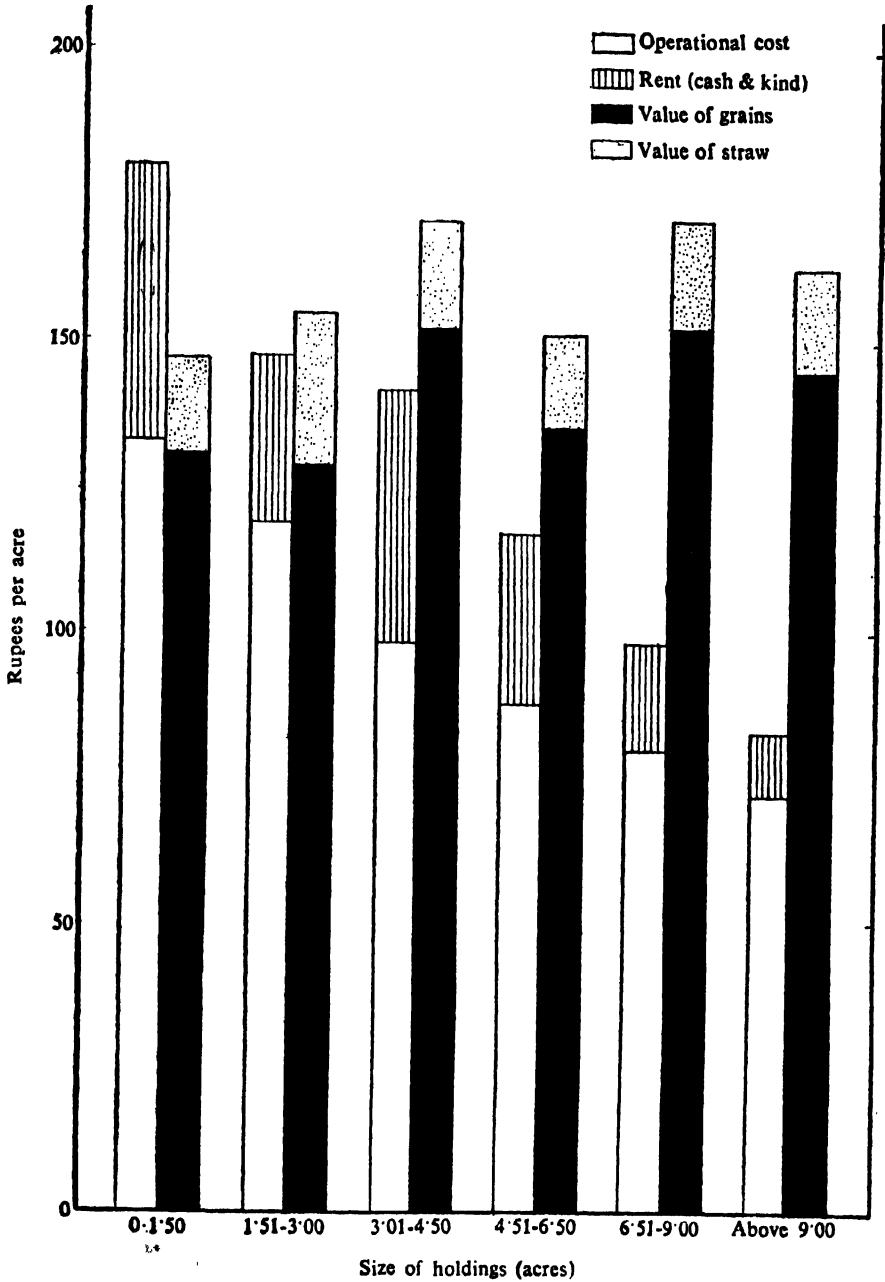


Fig. 6

This is shown by the following estimates combined for the two centres:—

Table 35—Input of Human Labour (for Interculture) and Output of Paddy

(Combined for Kendrapara and Monoharpur)

Size of holdings	Human labour per acre for interculture	Manure per acre	Yield per acre
(Acres)	(Mandays)	(Mds.)	(Mds.)
0 - 1.50	7.83	2.28	12.25
1.51 - 3.00	7.34	2.87	12.20
3.01 - 4.50	9.46	5.24	14.69
4.51 - 6.50	7.20	2.05	11.43
6.51 - 9.00	9.13	5.25	16.14
Above 9.00	13.15	7.85	18.94
All farms	8.25	3.80	13.65

The intensity of manuring and interculture increased with the farm size and so did the per acre yield of paddy. The finding here is different from that for Jute. Evidently, manure was considered much less essential for paddy and used only when available in sufficient quantities. The good effect of interculture, again, on the yield of broadcast *aman* (except at Kendrapara) and *aus* receiving the best care by way of weeding, was practically lost on account of bad weather. Finally, the bigger farms with larger acreage and aggregate outturn had some advantages over the smaller ones in producing and utilising seedlings, threshing, etc., and for this their input is slightly low. The wastage, on the other hand, of a portion of labour and the cost thereon becomes unavoidable in case of smaller farms.

The purpose of the above discussion is to show why under the conditions in which paddy was cultivated in the investigation centres in 1956-57, its output did not decline, as in the case of jute, with the fall in input on the bigger farms. The reason briefly is that the output of those varieties of paddy for which

the input was large, was adversely affected by weather while the input was low on the items which generally increase the yield. In the centres showing higher outlay on such items (more by the bigger than the smaller farms), the corresponding output was better.

Reverting now to Table 34, it will be noticed that as in the case of jute, the profit per maund of paddy is more as the holding size becomes larger. The net profit per farm mounts up still further because, as the farm grows in size, the area sown to paddy and its gross outturn increase and with it goes up the total net income. As compared to jute, however, the rise in the net profit from paddy with the increase in the farm size was not so sharp per maund of output. But steep rise in the aggregate paddy output from a larger area than under jute enhances the net income of the bigger farms from paddy much more than from jute.

A comparative study of jute and paddy

In the foregoing discussion on paddy, the comparative position of jute has been stated whenever occasion arose. These may now be summarised below from the relevant figures compiled for the crops in Table 36 on page 54 and from Fig 7.

(a) The respective acreage under jute and paddy maintained nearly the same position as before, namely, that the average farm had two and a half times as much area under paddy as under jute. This obviously shows the relative importance of the two crops in the growers' farming economy.

(b) With much reduced yield than that of paddy but input not as much low, the cost per maund of jute in 1956-57 was more than $2\frac{1}{4}$ times the cost of paddy.

(c) Against a cost ratio between jute and paddy increasing from 2.08 in 1955-56 to 2.29 in 1956-57, the parity ratio of their prices declined. Therefore, though the price in relation to production cost continued to be higher for jute than paddy, the margin of difference in the profits from the two crops became narrower as compared with the previous year.

Table 36—A Statement of the Comparative Position of Jute and Paddy Cultivation

Centre	Area sown per farm		Yield per acre		Cost* per acre		Cost* per maund		Ratio between costs of jute and paddy	Price per maund		Ratio between jute and paddy prices
	Jute (Acres)	Paddy (Acres)	Jute (Mds.)	Paddy (Mds.)	Jute (Rs.)	Paddy (Rs.)	Jute (Rs.)	Paddy (Rs.)		Jute (Rs.)	Paddy (Rs.)	
Monoharpur	0.95	2.04	4.21	10.39	229.71	156.27	54.56	15.04	3.63	25.00	12.38	2.02
Belakoba	1.29	4.71	3.77	13.79	154.58	98.62	41.00	11.06	5.73	26.59	11.06	2.40
Purnea	1.18	2.29	8.06	7.57	129.96	90.76	16.12	11.99	1.34	24.47	11.56	2.12
Kendrapara	1.32	4.21	6.33	17.45	117.10	110.37	18.50	6.32	2.93	29.22	8.63	3.39
Nowgong	1.35	2.10	15.70	13.97	291.08	166.69	18.54	11.93	1.55	24.26	12.25	1.98
All centres (1956-57)	1.22	3.09	8.45	12.67	180.29	118.16	21.34	9.33	2.29	25.39	11.31	2.24
All centres (1955-56)	1.25	3.30	10.17	12.18	202.06	116.17	19.86	9.54	2.08	23.71	9.02	2.63

Centre	Net profit(+) or loss(-) per md.**		Net income(+) or loss(-) per farm***		Mandays per acre		Cattledays per acre		Proportion of hired human labour		Paid cost (operational) per acre	
	Jute (Rs.)	Paddy (Rs.)	Jute (Rs.)	Paddy (Rs.)	Jute (No.)	Paddy (No.)	Jute (No.)	Paddy (No.)	Jute (%)	Paddy (%)	Jute (Rs.)	Paddy (Rs.)
Monoharpur	(-) 26.88	(+) 2.52	(-) 1.09	(+) 181.89	81.03	42.38	18.90	35.86	25.15	72.81	33.45	33.45
Belakoba	(-) 13.85	(+) 4.57	(+) 15.04	(+) 456.16	42.31	26.57	53.96	34.44	2.58	2.47	5.85	0.48
Purnea	(+) 9.35	(+) 0.07	(+) 100.27	(+) 28.92	57.47	39.23	45.26	41.65	72.77	75.28	71.20	40.51
Kendrapara	(+) 12.89	(+) 3.84	(+) 134.17	(+) 359.55	49.15	47.06	22.38	20.94	34.99	53.79	23.00	33.18
Nowgong	(+) 8.18	(+) 6.48	(+) 277.66	(+) 115.63	87.04	41.84	42.35	44.73	57.05	38.98	139.75	43.65
All centres (1956-57)	(+) 5.95	(+) 3.36	(+) 112.35	(+) 235.44	60.81	36.26	40.36	33.27	45.83	35.06	62.68	23.61
All centres (1955-56)	(+) 5.37	(+) 0.91	(+) 147.35	(+) 164.81	75.76	36.88	39.01	33.24	45.78	26.15	65.03	24.09

**Including rent in cash and kind

***Including the value of by-product

***Including the value of family labour

COMPARATIVE POSITION OF JUTE AND PADDY (Average for five centres)

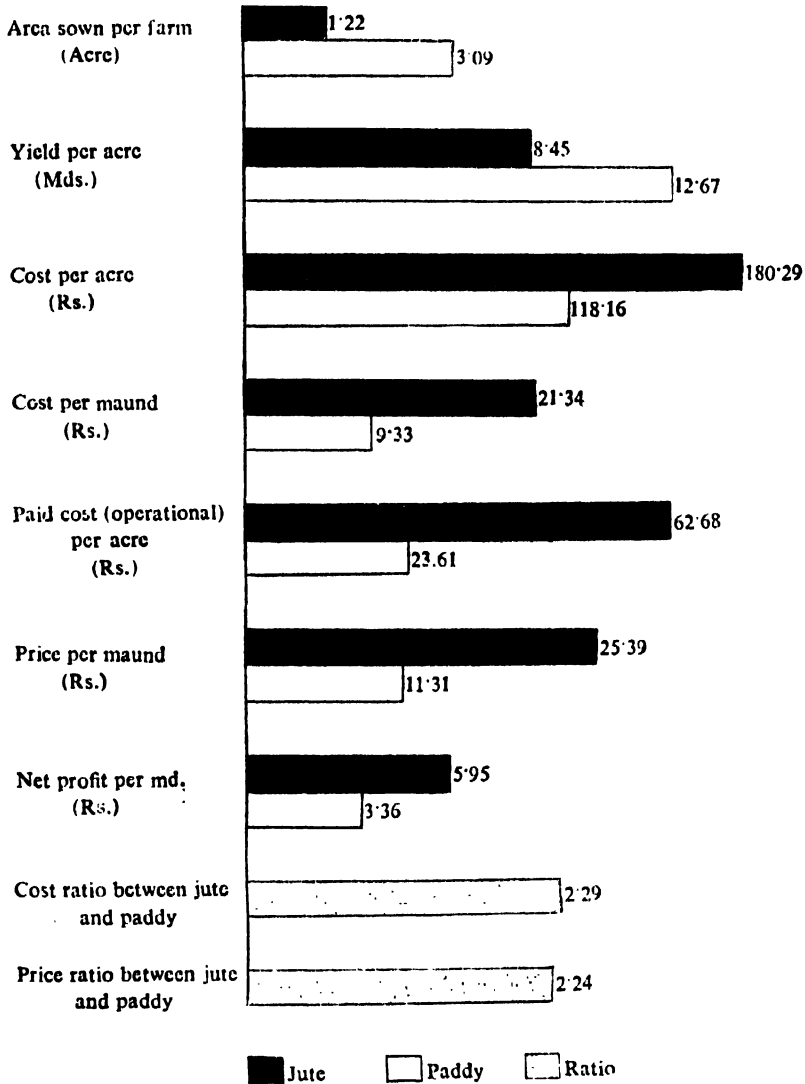


Fig. 7

(d) Because of the opposite movement in the cost and price ratios much to the disadvantage of jute, the position of the jute growers as purchasers of paddy somewhat deteriorated in 1956-57.

(e) The money values of the total input for two crops maintained almost the same proportion as the volume of human labour employed in each. This is because a little higher cost of cattle labour and manure for jute almost equalised the excess costs of seeds and seedlings for paddy.

(f) The rent in cash and kind which is usually higher for jute, was almost equal to that for paddy in 1956-57.

(g) Not only the total requirement of human labour but also the proportion of it which had to be hired, was more for jute than paddy. So the cash expenditure on the cultivation of jute was far above that spent on paddy.

(h) The pattern of variation in input according to the size of holdings is similar for the two crops, namely, that the former declines with the increase in the latter. But while the effect of change in input on the output is somewhat clearly visible in case of jute, this is not so for paddy due to various reasons. Nevertheless, the unit cost of production declines for the average farm as its size becomes larger. Therefore, the profit and net income per farm from both of them increase with the holding size.

IV. FARMER'S ECONOMY

We have mentioned in the introductory chapter that the farms on which jute and paddy were not sown at all have been excluded from the cost analysis. The study of the farmer's economy, however, covers all the selected cultivators numbering 193 in the five centres, irrespective of the varieties of crop produced by them.

Size of the farm family

For proper assessment of the economic position of the farming family, a reference to its size and composition is indispensable. Given a certain level of income, the size of the family is the index of economic prosperity for each of its members. On the other hand, the number of working members in the family shows its labour potential. This in its turn shows how far the farm is self-sufficient in labour supply, human labour being much more important than any other form of input in operating the farm. From all these considerations, it is necessary to study how the family size is related to the farm size as also the effect of one on the other. The relationship is fairly indicated by the figures tabulated below.

Table 37- Relation of Size of Family to Size of Farm

Size of holdings (Acres)	No. of farms	Adult units per family						All centres	
		Monoharpur	Belakoba	Purnea	Kendrapara	Nowgong	All centres	Working units per family	Ratio between adult and working units
0—1·50	23	3·89	...	3·13	3·25	4·25	3·84	1·17	3·28
1·51—3·00	47	6·25	4·50	3·50	3·63	5·44	5·14	1·78	2·89
3·01—4·50	37	7·31	3·96	4·22	4·71	6·12	4·87	1·93	2·52
4·58—6·50	42	10·65	5·48	6·90	5·15	8·97	7·06	2·46	2·87
6·51—9·00	27	13·63	6·29	7·42	5·32	7·50	6·78	2·50	2·71
Above 9·00	17	...	9·38	6·03	9·25	...	7·59	2·60	2·92
All farms	193	6·65	5·68	5·63	4·85	6·14	5·80	2·06	2·82
Average no. of persons per family		8·24	7·23	6·88	5·72	7·58	7·14	...	...

For the sample selected for investigation, the average number of persons per family to be 7.14 or, its equivalent

5.8 adult units. Monoharpur has the largest family size followed by Nowgong and Belakoba while Kendrapara has the lowest with Purnea coming between the latter two centres. We shall have occasion to see later how the income and expenditure of the families are related to their sizes.

The size of the family increases with the increase in the size of holdings and this trend is similar in all the centres, the difference being one of magnitude. It is also significant that larger holdings have more working members. The rate of increase in the total adult units and their working counterparts is not widely divergent except in the lowest group having a disproportionally small family size. The ratio between the two, as the last column of Table 37 would show, moves within narrow limits around an average calculated at 2.82.

It may be recalled that similar were the findings also in the previous year. The bigger the family, more is the number of working members on it and hence a larger farm can be managed and operated under the present method of agriculture which is labour-intensive. Still, for bigger farms, the family labour is not large proportionately to the total cropped area. This can be seen from the following table:—

Table 38—Intensity of Family Labour Utilisation in Agriculture
(All centres)

Size of holdings (Acres)	Cultivated area per working member			Input per acre (by value) of family labour for	
	Area under jute (Acres)	Area under paddy (Acres)	Net cropped area (Acres)	Jute (Rs.)	Paddy (Rs.)
0—1.50	0.34	0.38	0.71	67.72	48.55
1.51—3.00	0.47	0.81	1.24	65.17	37.16
3.01—4.50	0.57	1.32	1.74	51.59	46.08
4.51—6.50	0.58	1.44	1.87	54.48	38.39
6.51—9.00	0.81	1.30	2.42	40.91	43.12
Above 9.00	0.65	1.85	3.18	30.79	23.81
All farms	0.59	1.23	1.87	50.16	38.32

The area under jute and paddy as well as the net cropped area per working member show a clear upward trend with the

rise in farm size. Again, larger area per working member means smaller input of farm labour for the bigger farms. This is shown by the diminishing value of family labour input per acre for jute and paddy with the increase in the holding size. We have also noted before that the total input per acre for jute and paddy declines as the size of the farm increases. This would indicate that either the bigger farms have not sufficient resources for increased investment in agriculture after meeting the requirements of their large families or they find it more profitable to invest their surplus funds in non-farm activities.

Farmer's income

We have had an idea of the volume of net income derived from jute and paddy cultivation in 1956-57 and its variation from the year before. The estimates of income from other sources—both farm and non-farm are given below.

Table 39—Farmer's Annual Income
(Per family)

Centre	Farm income		Non-farm income		Total income	Income per capita	Income per adult unit
	Amount (Rs.)	% of total	Amount (Rs.)	% of total			
Monoharpur	506.91	27.95	1,306.71	72.05	1,813.62	220.01	272.50
Belakoba	826.25	69.43	363.78	30.57	1,190.03	164.71	209.47
Purnea	496.18	31.21	1,093.79	68.79	1,589.97	231.27	282.35
Kendrapara	687.91	42.72	922.52	57.28	1,610.43	281.43	332.24
Nowgong	701.48	43.11	925.42	56.89	1,626.90	214.77	264.81
All centres (1956-57)	644.96	41.31	916.47	58.69	1,561.43	218.69	269.31
All centres (1955-56)	583.07	41.35	827.14	58.65	1,410.21	201.90	249.57

The average family of the five centres taken together earned an annual income amounting to Rs. 1561.43 in 1956-57—an increase by more than Rs. 150 per household as compared with the foregoing year. Reduced to per capita, this works out at about Rs. 219 or, Rs. 18.22 per month against Rs. 16.83 in 1955-56 and Rs. 16.47 in 1954-55. The average income, it appears, has fairly improved as the above comparative estimates would show.

Looking into the source from which higher income accrued, it will be seen that the two sources, farm and non-farm, contributed to the rise in income in such a way that the percentage receipt from each source was of the same order as in the previous year, i.e., 41% from farm and 59% from non-farm. For reasons already stated, the farm income declined at Monoharpur and Purnea, and it substantially increased at the other three centres. The rise in the non-farm income, however, was rather small at the three centres but remarkable at Kendrapara while income dropped under both the farm and non-farm heads at Monoharpur. It will be further noticed that in all the centres the relative importance of the two sources of earning remained more or less the same as before.

We have pointed out in our previous reports and this is also found from the present analysis that the non-farm source provides more money to the cultivator than what is available from the farm. Evidently, the operators of small holdings are incapable of supporting their families with meagre farm income and of necessity, they have to look out for supplementary sources of earning. Naturally this compels the farmers to live in a mixed economy in which non-farm sources are as much if not more important as the farm source.

It may be pointed out in the above context that the non-farm income in the village sector is in some way linked with the farm income. Besides some small business and other extra-farming activities of the cultivators, the main source of non-farm income is in the form of wages earned from agricultural work on other farms, receipts from share-rented lands and the like. In other words, the income derived from these sources is associated with and its volume is determined by the agricultural activities of some other farms in the same region. Therefore, in years of good agriculture, not only the farm but also the non-farm income of the growers is better. This is illustrated fairly well at least by two of our centres Monoharpur and Kendrapara. Taking these two opposite cases, it would be seen that while the farm and non-farm income declined in a bad year of agriculture at Monoharpur, Kendrapara recorded some spectacular rise in both due to brisk activities in connection with paddy.

Now, if we relate the total income with the size of the family, it will be found that Monoharpur had the highest income per family, but its size being also bigger than in the other centres, the per capita (and per adult unit) income there was comparatively low. Between Kendrapara and Nowgong, the average member was economically much better off at the former centre although the total family income was somewhat higher in the latter centre. Obviously, the small size of the family was responsible for comparative solvency of its members at Kendrapara.

Sources of farm income

Further analysis of farm income would show that as in the foregoing years, minor crops and other farm products contributed on an average nearly as much to the total pool of farm income as the two major crops, jute and paddy. The relative importance of the different sources of farm income can be judged from the following estimates:—

Table 40—Farm Income according to Source
(Rupees per farm¹)

Source	Monoharpur	Belakoba	Purnea	Kendrapara	Nowgong	All centres (1956-57)	All centres (1955-56)
Jute ² ...	5.17	29.06	105.68	172.16	297.99	122.79	161.33
Paddy ...	176.98	455.16	27.47	394.52	106.95	229.71	161.62
Other crops ² ...	163.69	134.88	31.18	118.54	317.27	153.66	107.23
Other farm products ² ...	209.33	217.53	346.66	53.60	119.32	191.79	200.99
Total ...	555.17	836.63	510.99	738.82	841.53	697.95	631.17
Net farm income (1956-57) ...	506.91	826.25	496.18	687.91	701.48	644.96	...
Net farm income (1955-56) ...	554.66	684.00	580.62	445.38	639.91	...	583.07

¹ Average of all farms. The figures for jute and paddy in this table are different from those given in Tables 7 and 33 because in the latter case only farms growing these crops were taken into account.

² Including income from jute cultivated under the improved methods

³ Gross income

The net income from jute at Monoharpur and Balakoba and from paddy at Purnea can be said to be rather negligible. This was nearly so for the minor crops as well at Purnea and from other farm products at Kendrapara but not at the three other centres where these items brought in more income in 1956-57 than in 1955-56. Fairly good weather later in the season generally helped the rabi crops and vegetables. It was at Purnea alone that all the crops, major and minor, were more or less adversely affected. On an average, however, other farm products ranked next to paddy in providing income to the farm.

DISTRIBUTION OF INCOME ACCORDING TO SOURCE
(Average for five centres)

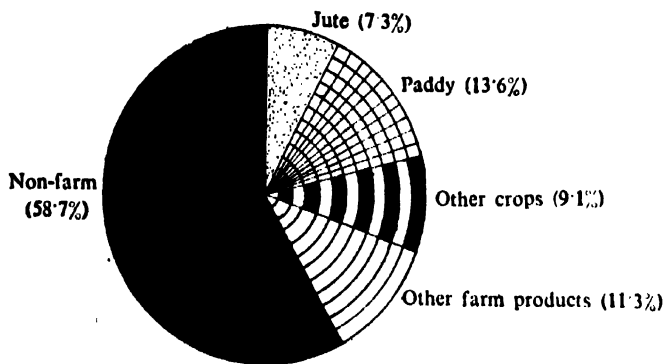


Fig. 8

The nature of the income distribution according to sources (Fig. 8) and their relative importance in the total economy of the farm would clearly indicate the mixed and diversified character of farming. In the present context, this does not seem to be undesirable because of the uncertainty of weather, on the one hand and the small size of the average holding, on the other. Many of the farm products and minor crops, as we shall see later, are consumed on the farm. Such diversification, therefore, makes the farmers self-sufficient to some extent in their consumption needs while specialised farming becomes much restricted in the absence of ready markets for sale of the commo-

dities so produced. The income analysis would clearly show that but for this diversified farming it would not have been possible for the growers to come out of the impending economic distress. Loss of income on jute at Belakoba and Kendrapara, for instance, was more than recouped by higher income from paddy while very low income from crop cultivation at Purnea was supplemented by fairly large earning from other farm products. So the small farmers who form the majority of our agricultural community, have to depend for their living largely on diversification of farm business.

Income in cash and kind

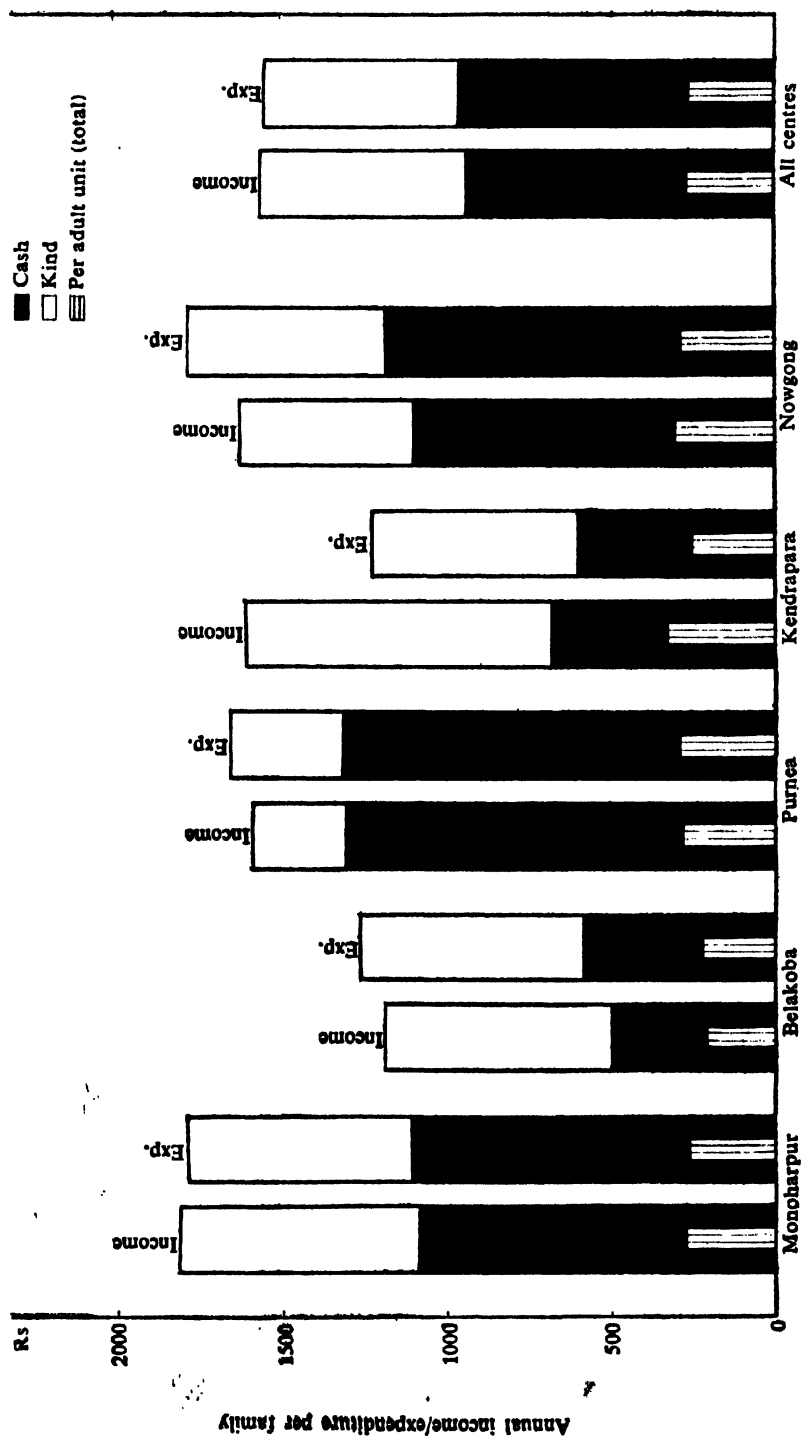
The analysis of the cash and non-cash components of the farmers' income is no less important in as much as it helps to understand to what extent the farmers' economy is monetised and how far his need for cash money in farming and family maintenance is satisfied from the volume of cash income. The break-up of the total income according as it was earned in cash or kind, is given below and in Fig. 9 (page 64).

Table 41—Farmer's Income in Cash and Kind

(Per family)

Centre	Cash		Kind		Total	
	Rs.	%	Rs.	%	Rs.	%
Monoharpur ...	1,080·13	59·56	733·49	40·44	1,813·62	100·00
Belakoba ...	494·21	41·53	695·82	58·47	1,190·03	100·00
Purnea ...	1,308·97	82·33	281·00	17·67	1,589·97	100·00
Kendrapara ...	678·21	42·11	932·22	57·89	1,610·43	100·00
Nowgong ...	1,094·65	67·28	532·25	32·72	1,626·90	100·00
All centres (1956-57)	934·16	59·83	627·27	40·17	1,561·43	100·00
All centres (1955-56)	887·95	62·97	522·26	37·03	1,410·21	100·00

FARMER'S AVERAGE INCOME AND EXPENDITURE



Very poor output of jute as the main cash crop perceptibly reduced the volume of cash income as well as its percentage to total earning at Monoharpur and Belakoba in 1956-57 as compared with the previous year. Higher non-farm income, on the other hand, at Purnea, Kendrapara and Nowgong which was earned mostly in cash, and larger jute sales at the latter place increased the cash resources of the farmers at these three centres. The non-farm sources, as we know, provide the bulk of cash money to the farmer, its share in the total cash income being more than 75% in 1956-57. Of the different farm-produced commodities, however, jute is by far the most important in as much as it supplied more than 70% of the cash earned on the farm. But as compared with the farmer's total cash receipts, the net contribution of jute, after deducting its cost of cultivation, was of the order of 17%.

Larger income in kind during 1956-57 is attributable, in the first place, to better farm output in respect of those items which did not find their way into the market and secondly, to an appreciable increase in the price of paddy which inflated the estimated value of rice produced and consumed on the farm. It is significant to note in this connection that the annual paddy sales by our average selected grower did not exceed 2.92 maunds against 1.44 maunds in the year before. Similarly, the minor crops and miscellaneous farm products are also of little importance as cash earners.

The effect of all these was to reduce the proportion of cash to total income. Still cash income continued to be more predominant except at Belakoba and Kendrapara. The income in kind, however, is an index of the extent to which the farmers' economy in a centre is non-monetary. This is also a measure of the degree of self-sufficiency of the farmers and to the extent that this is so, the fluctuations in market prices do not affect their economy so long as the physical volume of farm output is not adversely affected.

The estimates of cash income given in Table 41 are the net cash receipts of the farmers after meeting the cash expenses of farming. How far this income met the cash requirement of the farmers for family maintenance, will be shown by an analysis of the farmers' family budget.

Farmer's family budget

The estimates of annual expenditure are given below and in Fig. 9.

Table 42—Farmer's Annual Expenditure
(In rupees)

Centre	Per family	Per capita	Per adult unit
Monoharpur ...	1,792'00	217'39	269'25
Belakoba ...	1,266'87	175'35	222'99
Purnea ...	1,659'44	241'37	294'68
Kendrapara ...	1,231'68	215'24	254'10
Nowgong ...	1,789'68	236'26	291'30
All centres (1956-57)	1,550'69	217'19	267'46
All centres (1955-56)	1,335'22	189'64	236'30

Our previous investigations have shown that expenditure follows the trend of income. This was also generally true in 1956-57 when the expenditure was found to increase with income. The annual expenditure substantially increased by more than Rs. 100 per household even at Monoharpur despite some little fall in income as compared with 1955-56. At the other centres too the rise was very sharp—by a little less than Rs. 260 at Belakoba and Kendrapara and more than Rs. 180 at Purnea and Nowgong. The average increase was of the order of Rs. 200 per family or nearly 16%. The corresponding income rose to the extent of Rs. 151 per family or by 11% in 1956-57 as compared with the previous year.

On an average, therefore, the per capita expenditure worked out at Rs. 18.10 per month in 1956-57 and this compares with the corresponding income calculated at Rs. 18.22. The corresponding estimates of both expenditure and income were lower in 1955-56 being Rs. 15.80 and Rs. 16.83 respectively. The total volume of family expenditure was, as before, considerably higher at Monoharpur, Purnea and Nowgong than at the other two centres. But on account of some variation in the family size among the centres, the expenditure for an average member or its adult equivalent was of a different order. Evidently, these latter estimates show in a better way the comparative levels of spending and the standard of living in the respective centres.

Further analysis of consumer expenditure (Table 43 and Fig. 10) besides indicating the relative importance of the different items, will explain among other the reasons for increase in the cost of living of the growers. Of the total expenditure, nearly two thirds were accounted for by food alone. Its proportion was higher still at Belakoba but much lower at Kendrapara. These were also the proportions of food expenses in the earlier years.

Coming now to the individual items, it will be noticed that the average expenditure mounted up more or less on all the items except medical relief. Of the rest besides food, marked rise was noticeable in the expenses on social and religious functions, interest and loan repayment and the miscellaneous group of items. All these point towards somewhat better conditions of the farmers in general because it is in the year of comparative economic prosperity that more liberal spending is possible under the former two heads. This was no doubt true in case of expenses on social and religious functions for the farmers with good income, but not quite so in respect of interest and loan repayment. Poor farm income due to major crop failure induced a considerable section of the farmers to take loans for doing some petty business particularly at Monoharpur, Belakoba and to some extent at Purnea. This loan was, however, mostly repaid within the same year out of the income thus earned, as the following loan account would indicate:—

Table 44—Farmer's Loan Account
(Rupees per family)

Centre	Loan taken [*]		Loan* repaid	
	1955-56	1956-57	1955-56	1956-57
Monoharpur ...	121.62	166.43	55.79	96.31
Belakoba ...	19.89	75.63	33.55	61.81
Purnea ...	32.20	65.75	37.09	33.88
Kendrapara ...	45.55	43.69	45.26	77.82
Nowgong ...	171.63	169.87	110.60	165.27

* Including interest

The above figures explain for some centres why greater amounts of loan were taken in 1956-57 than in the previous year. At Nowgong, however, a considerable amount of loan had to be incurred for meeting the deficit as we shall show later.

**PERCENTAGE DISTRIBUTION OF FARMER'S
FAMILY EXPENDITURE
(Average for five centres)**

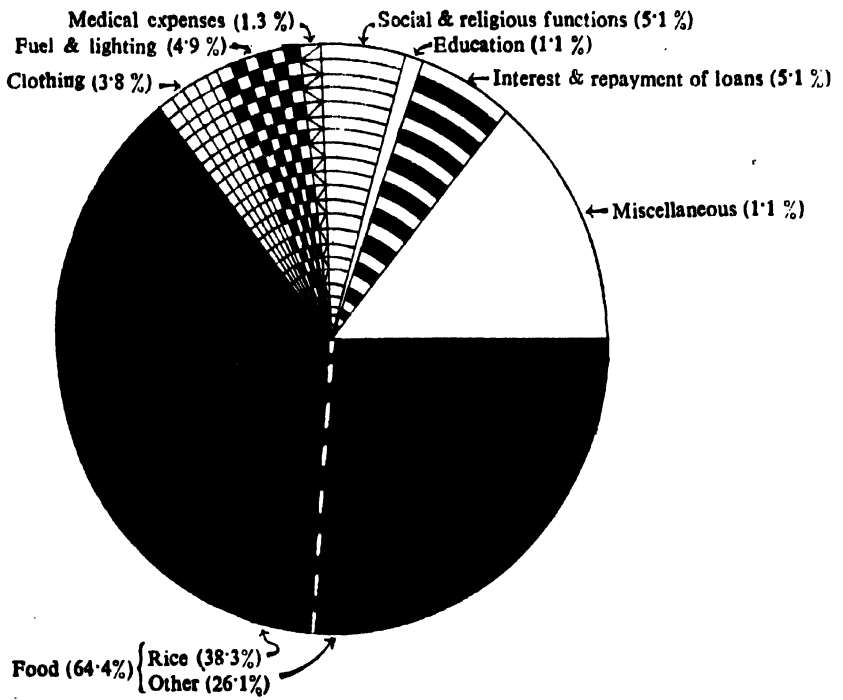


Fig. 10

Table 43—Farmer's Family Budget

Items of expenditure	Average expenditure per family						Percentage distribution of average expenditure.					
	Mono-harpur (Rs.)	Bela-koba (Rs.)	Purnea (Rs.)	Kendra-para (Rs.)	Now-gong (Rs.)	All centres (Rs.)	Mono-harpur (%)	Bela-koba (%)	Purnea (%)	Kendra-para (%)	Now-gong (%)	All centres (%)
Food	1,213.42	919.11	1,044.50	648.07	1,148.19	998.44	67.71	72.55	62.94	52.62	64.16	64.39
Clothing	51.62	46.22	59.08	36.54	100.60	59.39	2.88	3.65	3.57	2.97	5.62	3.83
Fuel & lighting	95.52	40.67	81.01	80.43	85.96	76.34	5.33	3.21	4.88	6.53	4.80	4.92
Medical expenses	37.25	10.63	12.42	17.44	24.05	20.15	2.08	0.84	0.75	1.41	1.34	1.30
Social & religious functions	124.56	20.33	69.26	124.51	60.29	78.17	6.95	1.60	4.17	10.11	3.37	5.04
Education	19.42	11.62	20.49	14.56	18.84	17.00	1.09	0.92	1.23	1.18	1.05	1.10
Interest & repayment of loans	96.31	61.81	33.88	77.82	165.27	87.06	5.37	4.88	2.04	6.32	9.24	5.61
Miscellaneous	153.90	156.48	338.80	232.31	186.48	214.14	8.59	12.35	20.42	18.86	10.42	13.81
Total (1956-57)	1,792.00	1,266.87	1,659.44	1,231.68	1,789.68	1,550.69	100.00	100.00	100.00	100.00	100.00	100.00
Total (1955-56)	1,678.39	1,008.06	1,471.05	973.46	1,508.99	1,335.22	...	...	...	...	...	...

89

Items of expenditure	Average expenditure per adult unit					
	Mono-harpur (Rs.)	Bela-koba (Rs.)	Purnea (Rs.)	Kendra-para (Rs.)	Now-gong (Rs.)	All centres (Rs.)
Food	182.32	161.78	185.48	133.70	186.89	172.21
Clothing	7.75	8.13	10.49	7.54	16.38	10.24
Fuel & lighting	14.35	7.16	14.39	16.59	13.99	13.17
Medical expenses	5.60	1.87	2.20	3.60	3.91	3.48
Social & religious functions	18.72	3.58	12.30	25.69	9.81	13.48
Education	2.92	2.05	3.64	3.00	3.07	2.93
Interest & repayment of loans	14.47	10.88	6.01	16.05	26.90	15.02
Miscellaneous	23.12	27.54	60.17	47.93	30.35	36.93
Total (1956-57)	269.25	222.99	294.68	254.10	291.30	267.46
Total (1955-56)	253.66	190.05	264.26	198.36	260.92	236.30

The relative importance of the different heads remained more or less the same as before at the five centres both jointly and severally. The general pattern of expenditure distribution gives a fair idea of the comparative standard of living in the individual centres. Thus as high as 73% of the total expenditure on the essential items like food, clothing, fuel and light and much smaller expenses on other items underline the general low standard of living for the farming families. This is even more emphasised by a very poor intake of food whose value was only Rs. 0.47 per day for an adult of the farmer's family. The high price of food meant higher expenditure on this item, while the expenditure on other items did not materially change. Only at Kendrapara it appears that the farmers probably improved their lot to some extent because of higher income, on the one hand and more liberal spending on non-essential items, on the other.

Food consumption

We shall now give a more detailed discussion on food which, as we have just now shown, is by far the most important item of consumer expenditure. The total intake of food was found to be rather low since its average value in 1956-57 for an adult of the farmer's family did not exceed Rs. 0.47 per day. The position would perhaps appear worse still if allowance is made for the rise in foodgrain price. Obviously, the predominance of foodgrains makes it possible for them somehow to maintain their existence. In this context, it would be worthwhile to make quantitative estimates of rice consumption by our selected farmers as in the following table:—

Table 45—Average Consumption of Rice

Centre	Annual consumption				Daily consumption per adult unit	
	Per family		Per adult unit		1955-56 (Srs.)	1956-57 (Srs.)
	1955-56 (Mds.)	1956-57 (Mds.)	1955-56 (Mds.)	1956-57 (Mds.)		
Monoharpur ...	32.60	33.11	4.93	4.97	0.539	0.545
Belakoba ...	34.42	35.78	6.49	6.30	0.711	0.690
Purnea ...	38.20	37.12	6.86	6.59	0.752	0.722
Kendrapara ...	34.33	34.11	6.99	7.03	0.767	0.771
Nowgong ...	39.98	36.82	6.92	5.99	0.758	0.657
All centres ...	35.94	35.45	6.36	6.11	0.698	0.672

The average consumption of rice in 1956-57 was nearly of the same order as a year ago at Monoharpur and Kendrapara while it declined slightly at Belakoba and Purnea and substantially at Nowgong. On the whole, the volume of rice consumption, as our investigation results show, was somewhat less. The reasons are not far to seek. The fall in the paddy production affected consumption at Purnea but not at Monoharpur where the farmers drew heavily upon the stock left from the previous year's bumper crop. On the other hand, lower consumption at Belakoba and Nowgong despite higher output is explained by the fact that in the former centre serious loss of the cash crop jute induced forced sales of paddy kept for consumption. The reported cases of premature paddy harvesting for meeting pressing cash needs were not few. At Nowgong, many farmers who do not grow enough paddy have to live largely on cash purchases of this essential commodity. Presumably, the rise in the price of rice affected its consumption so far as this category of farmers was concerned.

Further analysis of food according as it was produced on the farm or purchased would show how far the cultivators produced their own food. The separate estimates by value are given in Table 46 on page 72.

The growers of Belakoba and Kendrapara are almost self-sufficient in the matter of rice production, though for other food they have to depend more on outside purchases. A comparatively bad year for food crops at Purnea, on the contrary, made the farmers largely dependant on purchased food—both rice and others. A similar condition combined with dearth of cash money due to heavy loss of jute, compelled the growers of Monoharpur to draw heavily from the last year's stock. This increased the proportional value of rice furnished by farm but in normal years they depend more on purchased food. Finally, the average grower of Nowgong produced less than half of his total requirement of rice and miscellaneous food. Although the circumstances varied in the individual centres, the overall position in 1956-57 remained nearly the same as in the previous year with 48% of the total value of food furnished by farm and 52% of it purchased.

Table 46—Farmer's Food Consumption per Family

Food	Monoharpur		Belakoba		Purnea		Kendrapara		Nowgong		All centres	
	Rs.	%	Rs.	%	Rs.	%	Rs.	%	Rs.	%	Rs.	%
<i>Rice & paddy</i>												
Purchased	268.61	43.01	82.11	13.96	443.87	72.29	8.80	1.99	359.33	52.51	236.62	39.88
Farm produced	355.95	56.99	506.02	86.04	170.11	27.71	434.30	98.01	324.96	47.49	356.73	60.12
Total	624.56	100.00	588.13	100.00	613.98	100.00	443.10	100.00	684.29	100.00	593.35	100.00
<i>Other food</i>												
Purchased	329.98	56.04	189.59	57.28	310.29	72.07	114.36	55.79	251.90	54.30	240.40	59.34
Farm produced	258.88	43.96	141.39	42.72	120.23	27.93	90.61	44.21	212.00	45.70	164.69	40.66
Total	588.86	100.00	330.98	100.00	430.52	100.00	204.97	100.00	463.90	100.00	405.09	100.00
<i>All food</i>												
Purchased	598.59	49.33	271.71	29.56	754.16	72.20	123.16	19.01	611.23	53.23	477.02	47.78
Farm produced	614.83	50.67	647.41	70.44	290.34	27.80	524.91	80.99	556.96	46.77	521.42	52.22
Total (1956-57)	1,213.42	100.00	919.11	100.00	1,044.50	100.00	648.07	100.00	1,168.19	100.00	998.44	100.00
Total (1955-56)	1,149.67	100.00	762.90	100.00	905.07	100.00	543.46	100.00	965.97	100.00	871.98	100.00

Of the total consumption of rice, again, only 40% was purchased, the rest 60% being the farm output. It would thus be seen that the rise in prices of rice increased the expenditure on that essential food only in respect of two-third of its volume consumed. But the expenses on account of a major portion remained unaffected by price increase. For example, higher prices of foodgrains by themselves were not a source of much concern to the farmers of Belakoba and Kendrapara; rather those who sold paddy reaped the benefit of higher prices. On the other hand, their counterparts at Purnea were the hardest hit by a similar price increase.

Expenditure in cash and kind

Looking into the cash requirements of the farmers for food purchase, it would be seen that Purnea spent the largest amount followed by Nowgong and Monoharpur while the corresponding cash expenses were considerably less at Belakoba and still lower at Kendrapara. This largely accounts for much higher proportions of cash expenditure at the first three centres than at the last two, as will be shown by the following break-up of the total expenditure into cash and kind (see also Fig. 9).

Table 47—Farmer's Expenditure in Cash and Kind
(Per family)

Centro	Cash		Kind		Total	
	Rs.	%	Rs.	%	Rs.	%
Monoharpur ...	1,105.40	61.69	686.60	38.31	1,792.00	100.00
Belakoba ...	577.11	45.55	689.76	54.45	1,266.87	100.00
Purnea ...	1,310.26	78.96	349.18	21.04	1,659.44	100.00
Kendrapara ...	592.81	48.13	638.87	51.87	1,231.68	100.00
Nowgong ...	1,181.76	66.03	607.92	33.97	1,789.68	100.00
All centres (1956-57) ...	958.57	61.82	592.12	38.18	1,550.69	100.00
All centres (1955-56) ...	812.33	60.84	522.89	39.16	1,335.22	100.00

The percentage of cash to the total expenditure was somewhat higher than in the previous year in all the centres. The increase in consumer expenditure on food is attributable to

higher values of both purchased and home grown food. So the relative position of expenditure in cash and kind did not change on that account. It was only the higher expenses on the rest of the items which were incurred mostly in cash that inflated the cash component of the family budget. The bulk of this, as we have shown, came from non-farm sources thus making a large demand on cash earning. If, however, the farm fails to satisfy this demand and we had occasion to see that the farm meets only a small portion of it, then the non-farm sources become the main resort of the farmers. In this mixed nature of the farmer's economy, therefore, emphasis must be laid on the improvement in both the sectors of farm and non-farm economy. It will be neither possible nor desirable to deal with the one while ignoring the other.

Balance in cash and kind

We may now bring the income and expenditure of the growers together. The average estimates of balance in cash and kind are given in the next table.

Table 48--Balance in Cash and Kind

(Rupees per family)

Centre	Cash	Kind	Total
Monoharpur ...	(-) 25.27	(+) 46.89	(+) 21.62
Belakoba ...	(-) 82.90	(+) 6.06	(-) 76.84
Purnea ...	(-) 1.29	(-) 68.18	(-) 69.47
Kendrapara ...	(+) 85.40	(+) 293.35	(+) 378.75
Nowgong ...	(-) 87.11	(-) 75.67	(-) 162.78
All centres ...	(-) 24.41	(+) 35.15	(+) 10.74

The overall result shows a small surplus for the average grower, but the condition was widely different in the individual centres for which some clarification seems to be necessary. It may be seen that only Kendrapara shows a good surplus obviously due to a bumper paddy crop and better earning from non-farm sources accruing from greater agricultural activity in that region. Some small surplus was noticeable also at Monoharpur but the growers there were running short of cash money.

The other three centres, on the contrary, ran deficit budgets, the amount of deficit being fairly large at Nowgong. Adverse balance is rather chronic with the farmers of Nowgong; rise in the price of foodgrains further aggravated the position. Similar was the condition also at Purnea while at Belakoba failure of the important cash crop and lack of farming activities in the first part of the season were mainly responsible for the adverse balance particularly in respect of cash balances. These deficits were largely met by loan, the account of which has already been given in Table 44. The deficit in kind on the current year's account is explained partly by depletion of the previous year's stocks of foodgrains and partly by some of the outstanding payment in share rent yet to be made by the share-croppers. But this could not be paid due to their economic strain.

**Income and expenditure in relation
to the size of holdings**

The estimates of income according to farm size are given in Table 49 on page 76 for all the centres taken together. The figures under jute and paddy represent the net income per farm from those two crops which is the net profit or loss *plus* the value of family labour employed in their cultivation. It would be seen that the net income from jute and paddy as well as from minor crops and farm products, shows a clear rising trend with the increase in the farm size. Non-farm income also indicates a similar trend though not as clearly in the lower ranges of income as in the upper.

In the last column of the table, the total income has been calculated on per adult unit basis by taking into account the respective family sizes. These estimates obviously give a more correct picture of the comparative economic position of the average member in each of the size groups. Although no steady trend is noticed, there is some indication that the income per adult unit is higher for big than small farms.

Another interesting feature of income distribution is that the proportion of farm income to total income increases with the size of holdings. Farm income being comparatively less for the families with smaller holding size, they have to depend largely

Table 49—Farmer's Annual Income in relation to the Size of Holdings

(All centres)

Size of holdings	P E R F A M I L Y							
	F A R M I N C O M E				Non-farm income as % of total income	Non-farm income	Total income	Total income per adult unit
	Jute	Paddy	Others*	Total farm income				
		Rs.	Rs.	Rs.	Rs.	%	Rs.	Rs.	Rs.
Acres								
0—1·50	33·23	32·34	162·43	228·00	22·57	782·20	1,010·20	262·54
1·51—3·00	98·07	95·72	218·85	412·64	29·15	1,003·15	1,415·79	275·25
3·01—4·50	88·87	205·09	187·13	481·09	43·80	617·29	1,098·38	225·47
4·51—6·50	136·63	249·34	376·01	761·98	48·50	809·21	1,571·19	222·56
6·51—9·00	235·65	467·45	443·80	1,146·90	49·10	1,188·94	2,335·94	342·63
Above 9·00	172·69	494·71	454·34	1,121·74	45·53	1,341·85	2,463·59	324·66
All farms	122·79	229·71	292·46	644·96	41·31	916·47	1,561·43	269·31

* Income from minor crops and farm products excluding farm expenses

on non-farm sources of income for maintaining their existence. The bigger farms, on the other hand, earn comfortable income from farm. Non-farm income is also important to them as much as or a little more than farm income but not so important as it is for the smaller farms.

Coming next to the expenditure side, let us see how it is related to the farm size. The detailed estimates per adult unit under different heads of expenditure are given in Table 50 on page 78.

The pattern of expenditure variation is almost similar to that of income. It generally shows a rising trend with the increase in the farm size though the average adult unit in size groups III and IV spends somewhat more than its opposite number in the first two groups. Here also the grouping size of the family affects the per head expenditure as in the case of income.

A closer examination of the expenditure distribution, item by item, would reveal some interesting features of the budget. Allowing for some deviation from the general trend* shown by some of the farms particularly in groups III and IV, it may be found that the expenditure on almost all the items except other food, fuel and lighting, medical relief and loan repayment, tends to rise with the increase in farm size. The fall in expenditure on those four items in case of the larger farms is understandable except for one item. The other food shows some increase after initial decline but not to the desired extent. Of course, quite contrary to expectation, the farms in the first two lower groups have higher levels of expenditure for their average adult unit and this generally affects the expected trend. Nevertheless, the fact remains that by and large the expenditure on the items which indicate a higher standard of living, is more for the average member of the bigger farms. This is further indicated by the fact that the big farmers on an average, spend more as food but in lesser proportion to the total expenditure. It is significant that the proportionate expenditure on the staple food rice is not much different for the small or big farmers. This suggests that

*This is not unlikely in case of a small sample as ours is, particularly when the regional differences are not negligible.

**Table 50)—Expenditure per Adult Unit
(All centres)**

Items of expenditure	SIZE OF HOLDINGS (ACRES)													
	0 — 1·50 (Gr. I)		1·51 — 3·00 (Gr. II)		3·01 — 4·50 (Gr. III)		4·51 — 6·50 (Gr. IV)		6·51 — 9·00 (Gr. V)		Above 9·00 (Gr. VI)		All farms	
	Rs.	%	Rs.	%	Rs.	%	Rs.	%	Rs.	%	Rs.	%	Rs.	%
Food : Rice	100·19	37·2	105·00	35·3	96·43	41·2	94·81	42·9	104·63	36·1	121·13	36·7	102·34	38·3
Others	81·15	30·1	82·14	27·6	64·49	27·5	62·33	28·2	65·74	22·7	69·81	21·1	69·87	26·1
Total food	181·34	67·3	187·14	62·9	160·92	68·7	157·14	71·1	170·37	58·8	190·94	57·8	172·21	64·4
Clothings	9·37	3·5	12·08	4·1	8·40	3·6	9·33	4·2	9·45	3·3	13·21	4·0	10·24	3·8
Fuel & lighting	16·88	6·3	15·16	5·1	12·57	5·4	11·07	5·0	13·97	4·8	11·41	3·5	13·17	4·9
Medical expenses	4·25	1·6	5·19	1·7	2·76	1·2	2·71	1·2	3·94	1·4	1·84	0·6	3·48	1·3
Social & religious functions	14·08	5·2	17·87	6·0	1·99	0·8	5·86	2·6	17·76	6·1	32·36	9·8	13·48	5·1
Education	2·30	0·8	3·55	1·2	2·10	0·9	1·38	0·6	5·06	1·7	3·91	1·2	2·93	1·1
Interest & repayment of loans	14·48	5·3	20·48	6·9	18·03	7·7	10·29	4·7	16·20	5·6	10·10	3·0	15·02	5·6
Miscellaneous	26·97	10·0	35·86	12·1	27·57	11·7	23·54	10·6	53·14	18·3	66·69	20·1	36·93	13·8
Total	269·67	100·0	297·33	100·0	234·34	100·0	221·32	100·0	289·89	100·0	330·46	100·0	267·46	100·0
Expenditure per family	1,037·63	...	1,529·35	...	1,141·59	...	1,562·39	...	1,964·82	...	2,507·63	...	1,550·69	...

in the villages and among the agricultural population, rice occupies a position in the family budget equally important for the small or big growers irrespective of their economic position. Similar is the finding also for clothing.

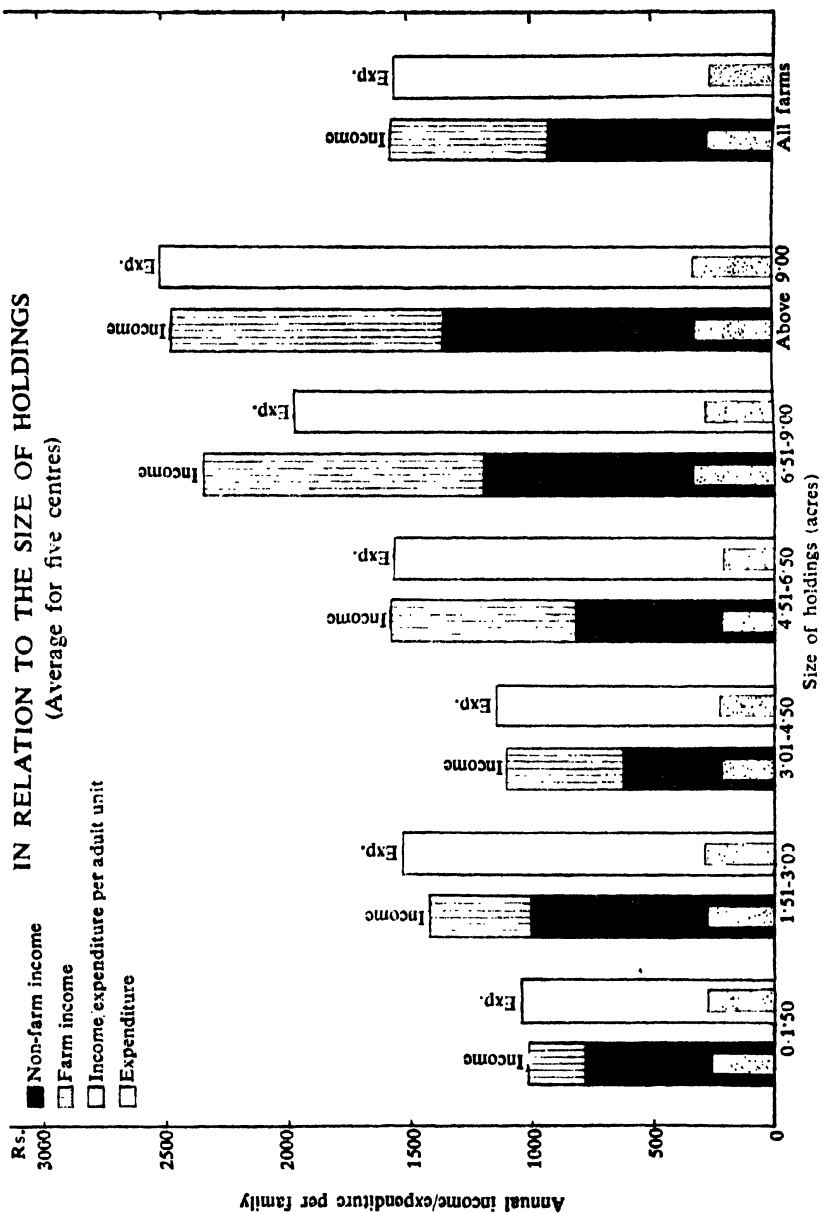
The income and expenditure may now be considered together in order to estimate the volume of saving for the small and big farms. This is shown below and in Fig 11.

Table 51—Farmer's Income and Expenditure in relation to the Size of Holdings
(All centres)

Size of holdings Acres	Per family			Per adult unit		
	Income	Expenditure	Balance	Income	Expenditure	Balance
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
0—1·50	1,010·20	1,037·63	(—) 27·43	262·54	269·67	(—) 7·13
1·51—3·00	1,415·79	1,529·35	(—) 113·56	275·25	297·33	(—) 22·08
3·01—4·50	1,098·38	1,141·59	(—) 43·21	225·47	234·34	(—) 8·87
4·51—6·50	1,571·19	1,562·39	(+) 8·80	222·56	221·32	(+) 1·24
6·51—9·00	2,335·84	1,964·82	(+) 371·02	342·63	289·89	(+) 52·74
Above 9·00	2,463·59	2,507·63	(—) 44·04	324·66	330·46	(—) 5·80
All farms	1,561·43	1,550·69	(+) 10·74	269·31	267·46	(+) 1·85

The table shows that in four out of six size groups, there is an adverse balance. However, if we leave out the two extreme groups, it is seen that as the farm size increases, the adverse balance gradually turns into a favourable balance and the amount of surplus also increases for the bigger farms. Therefore, the conclusion seems to be reasonable that though the bigger farms spend more than the smaller ones, much better income of the latter leaves for them a comfortable surplus. But perhaps they are not inclined to invest their surplus on the farm for increasing its productive efficiency because of the risk involved in agriculture.

ANNUAL INCOME AND EXPENDITURE OF THE FARMING FAMILIES IN RELATION TO THE SIZE OF HOLDINGS (Average for five centres)



APPENDIX

Note on the Crop Cutting Experiments on Jute

The crop cutting experiments on jute were performed on 14 plots at Nowgong and 15 plots each at the four economic investigation centres. The purpose, as usual, was to check up the yield estimates obtained from farm investigation, i.e., from sale and home consumption of jute as reported by the selected growers. The problems connected with the crop cutting experiment itself also came up for close study as in the previous years.

With a view to testing the accuracy or otherwise of the experimental results, the entire fibre grown on the experimental plots was weighed separately in addition to the weights of the 'cut' fibre which were taken as a part of the experiments. The green weights of plants harvested from the 'cut' portions were also collected in order to see how these were related to the corresponding weights of dry fibre*. The following are the comparative estimates of yield per acre obtained from the experiments and from farm investigation:—

Table A-1—Comparative Estimates of Yield
(Maunds per acre)

Centre	Crop cutting experiments		Farm investigation **
	Cut area	Whole plot	
1	2	3	4
Monoharpur ...	7.46	6.15	6.15
Belakoba ...	10.74	9.17	6.48
Purnea ...	11.36	11.01	9.24
Kendrapara ...	9.58	9.44	7.63
Nowgong ...	17.61	14.63	16.05
All centres ...	11.35	10.08	10.43

** Excluding the area on which jute totally failed

*From the pooled results of 1956-57, significant correlation was found to exist between the green weight of plants and the corresponding dry weight of fibre, the value of "r" being 0.475.

For better comparability of the different estimates, the area on which jute was totally lost, has been excluded in working out the yield rate under farm investigation. The above comparative estimates of yield per acre show the following characteristics which are worth noting:—

(a) The crop cutting experiment results (Col. 2) are over-estimates when compared with the other two series of yield rates (Cols. 3 and 4). This upward bias is not characteristic of this year alone but of the past years as well. The extent of over-estimation in the year under investigation is given by the following percentage figures:—

Table A-2—Measure of the Over-estimation of Yield Rate given by the Crop Cutting Experiments

Centre		Percentage over-estimation of the 'cut' yield over the estimates obtained from	
		Whole plot	Farm investigation
Monoharpur	...	21.3	21.3
Belakoba	...	17.1	65.7
Purnea	...	3.2	22.9
Kendrapara	...	1.5	25.6
Nowgong	...	20.4	9.7
All centres	...	12.6	8.8

Plot selection as well as demarcation 'cut' area were purely random. But accidentally, the crop on some of the experimental plots was better than on the rest of the jute plots, while the crop on some of the 'cut' portions was better still in case of three centres.

(b) Leaving aside, for the present, the question of ascertaining output from farm enquiry, the experiments seem to give inflated results even when compared with the corresponding estimates for the entire experimental plots from which cuts were taken. This is not, however, much unexpected for a crop like jute having heterogenous growth and that it was so, is clearly borne out by widely varying yields between the 'cut' and the whole plot areas. A few typical examples will substantiate it.

Table A-3—Cases of Widely Varying Yield Estimates

Case no.	Yield per acre		Percentage of over- (+) or under-estimation (-) of the 'cut' yield (%)
	'Cut' area (Mds.)	Whole plot (Mds.)	
1	6.95	0.77	(+) 802.60
2	11.93	0.06	(+) 96.86
3	3.40	8.17	(-) 58.38
4	10.70	5.69	(+) 88.05
5	15.05	21.00	(-) 28.33
6	26.85	20.31	(+) 32.20
7	22.94	15.91	(+) 44.19
8	17.36	11.11	(+) 56.26

It would be seen that there were cases of both over-estimation and under-estimation but the former preponderated over the latter as a result of which the experiments gave, on the whole, somewhat inflated figures. But there was nothing wrong with the experiment itself and it was done fairly satisfactorily as the following statistical analysis would show.

Table A-4—Results of Comparison of the Yield Estimates obtained from 'Cuts' and Whole Plots

Centre		Difference in average yield (Mds. per acre)	Standard error of the mean difference	Degrees of freedom	t
Monoharpur	...	1.3057	0.5462	14	2.3905
Belakoba	...	1.3333	0.6537	14	2.0396
Purnea	...	0.3416	0.2694	14	1.2680
Kendrapara	...	0.1398	0.6824	14	0.2049
Nowgong	...	2.9740	0.6468	13	4.5980*

* Significant at 1% level

The statistical tests performed on the data show no significant difference in the average yields obtained from the 'cut' areas and the whole plots except at Nowgong where some significant difference was observed. The little difference that the two estimates show in the other centres may be ascribed to chance errors. Nevertheless, there was some bias towards over-estimation given by the experimental results. Similar behaviour, it may be recalled, was noticeable also in the past years. From this trend, however, an impression is gradually gaining ground

(and it was also our previous contention) that over-estimation in yield per acre is perhaps unavoidable with the present size of the 'cut,' i.e. 25 square links or, 1/160th of an acre in the case of jute.

(c) Coming next to the more important aspect of the problem in which we are primarily interested, namely, the use of the crop cutting experiment result as a check against the yield estimates obtained from farm investigation, we find greater discrepancies between the two estimates. A comparison of the figures in the second and the last column of Table A-1 on page 81 would at once suggest that if the former is assumed to be nearer the true yield, the farm enquiry results in the individual centres are gross under-estimates, although the weighted average yield for the five centres taken together shows a discrepancy of the order of 9%. But from what we have already discussed, it will not be incorrect to presume that the crop cutting results have some upward bias. If we allow for some over-estimation there (in which case, the yields are better represented by the figures given in the third column of Table A-1), the overall farm investigation result, i.e., the estimate arrived at from sales and home consumption of jute, comes much closer and even slightly higher by 3%) to the corresponding experimental result.

The comparative figures of the individual centres are a bit more perplexing. Except for Nowgong where the farm enquiry suggested, on an average, a higher rate of jute output per acre than for the experimental plots, all other centres point towards some under-estimation of the yield rate obtained from farm investigation. In our notes submitted in the previous years, we have discussed at length the sources of error that are likely to disturb the output estimates worked out from the figures supplied by the growers. Some under-estimation on this account may be quite possible. The results of the year under report only corroborate our earlier views. The remedy so far as the investigation results are concerned, lies, to some extent, in a stricter vigilance of the sale, consumption and stock figures of jute for each of the selected farmers and if practicable, actual weighment of fibre soon after drying is complete. However, the study of all these problems will be pursued further in the new centres.

TABLES

*Table 1—Area sown with Jute
(Acre per farm)*

Year	Monohar- pur	Belakoba	Purnea	Kendra- para	Nowgong	All centres
1948-49	1.03	0.82	1.02	0.57	3.35†	1.36
1949-50	1.00	0.90	1.63	0.71	1.45	1.15
1950-51	1.08	0.91	0.92	0.89	1.52	1.08
1951-52	0.73	1.13	1.21	1.17	1.45	1.14
1952-53	0.91	0.99	1.15	1.08	1.41	1.11
1953-54	0.81	0.99	0.83	0.76	0.93	0.87
1954-55	0.85	0.98	1.05	0.82	1.17	0.97
1955-56	0.95	1.22	1.24	1.19	1.64	1.25
1956-57	0.95	1.29	1.18	1.32	1.35	1.22

*Table 2—Proportion of Cultivated Land under Jute
(Per cent)*

Year	Manohar- pur	Belakoba	Purnea	Kendra- para	Nowgong	All centres
1948-49	33.2	14.1	16.7	15.7	43.8†	26.4
1949-50	33.7	17.2	27.2	17.6	44.0	26.7
1950-51	34.6	19.0	19.6	21.1	50.3	27.3
1951-52	26.6	22.4	26.1	25.0	44.4	28.1
1952-53	32.5	19.6	23.7	22.4	42.7	26.8
1953-54	30.7	19.9	20.2	21.5	28.5	23.5
1954-55	31.8	22.0	24.0	18.6	38.2	25.9
1955-56	32.4	26.7	38.8	26.1	53.5	34.2
1956-57	35.2	25.3	28.6	31.2	45.3	31.8

*Table 3—Proportion of Share-rented to Total Jute Area
(Per cent)*

Year	Manohar- pur	Belakoba	Purnea	Kendra- para	Nowgong	All centres
1948-49	*	*	*	*	†*	* 21.8
1949-50	Nil	34.2	8.3	32.7	40.9	35.6
1950-51	23.5	47.7	23.7	41.1	41.2	33.6
1951-52	21.4	34.5	29.2	48.1	37.6	28.6
1952-53	12.0	34.4	39.0	37.0	21.4	25.2
1953-54	15.5	32.2	33.7	34.1	13.3	27.3
1954-55	18.8	33.0	16.5	37.4	29.7	30.6
1955-56	19.7	42.5	20.6	48.5	23.9	28.8
1956-57	20.0	41.1	23.8	44.2	14.9	

† For Rupohi

* Not calculated

Table 4—Average Cost of Production of and Profit and Loss on Jute—contd.

Year	Operational cost per acre	Rent per acre	Total cost per acre	Yield per acre	Cost per maund	Average price per maund	Value of jute sticks per md. of fibre	Net profit (+) or loss (-) per md.	Average output per farm	Net profit (+) or loss (-) per farm	Value of family labour per farm	Net income (+) or loss (-) per farm
	Rs.	Rs.	Rs.	Mds.	Rs.	Rs.	Rs.	Rs.	Mds.	Rs.	Rs.	Rs.
M O N O H A R P U R												
1948-49	330.94	10.69	341.63	13.02	26.25	35.50	2.06	(-) 11.31	13.40	(+) 151.56	151.57	(+) 303.13
1949-50	345.56	12.38	357.94	12.36	28.94	33.63	2.69	(+) 7.38	12.32	(-) 90.81	116.25	(-) 207.06
1950-51	239.06	28.13	267.19	5.40	49.44	38.37	3.69	(-) 7.38	5.85	(-) 43.13	107.00	(+) 63.87
1951-52	328.81	65.56	394.37	13.99	28.19	45.69	3.50	(+) 121.00	10.09	(+) 211.88	122.88	(+) 334.76
1952-53	333.31	27.94	361.25	10.52	34.31	21.94	1.13	(-) 11.24	9.53	(-) 107.19	144.19	(+) 37.00
1953-54	172.44	21.62	194.06	6.89	28.19	23.81	1.44	(-) 2.94	4.93	(-) 14.50	64.94	(+) 50.44
1954-55	303.10	29.41	332.51	11.81	28.15	27.50	1.47	(+) 0.82	9.66	(+) 7.92	104.78	(+) 112.70
1955-56	236.25	22.79	259.04	8.56	30.26	26.37	1.24	(-) 2.65	7.68	(-) 20.35	123.85	(+) 103.50
1956-57	215.33	14.38	229.71	4.21	54.56	25.00	2.68	(-) 126.88	1.51	(-) 40.59	39.50	(-) 1.09
B E L A K O B A												
1948-49	193.88	17.25	211.13	5.61	37.62	33.88	0.37	(-) 3.37	4.63	(-) 15.63	88.31	(+) 72.68
1949-50	199.50	45.75	245.25	8.94	27.44	32.13	0.75	(-) 5.44	8.05	(+) 43.81	109.50	(+) 153.31
1950-51	172.13	72.37	244.50	8.46	28.88	35.94	0.69	(-) 7.75	7.72	(+) 59.81	94.32	(+) 154.13
1951-52	161.44	68.88	230.32	8.60	26.81	47.44	0.62	(+) 121.25	9.71	(+) 206.31	106.88	(+) 313.19
1952-53	131.25	44.69	175.94	10.23	19.19	23.13	0.81	(-) 4.75	10.15	(+) 48.19	75.50	(+) 123.69
1953-54	176.13	70.81	246.94	16.62	14.88	25.13	0.75	(+) 111.00	14.99	(+) 1164.94	102.75	(+) 1267.69
1954-55	157.27	42.52	199.79	9.60	20.81	27.13	0.68	(+) 7.00	8.54	(+) 59.78	87.25	(+) 147.03
1955-56	142.19	57.85	200.04	11.90	16.82	24.62	0.72	(+) 8.52	13.36	(+) 113.83	97.93	(+) 211.76
1956-57	141.72	12.86	154.58	3.77	41.00	26.59	0.56	(-) 13.85	4.38	(-) 60.66	75.70	(-) 15.04

Table 4—Average Cost of Production of and Profit and Loss on Jute—contd.

Year	Operational cost per acre	Rent per acre	Total cost per acre	Yield per acre	Cost per maund	Average price per md.		Value of jute sticks per md. of fibre		Net profit (+) or loss (-) per md.	Average output per farm	Net profit (+) or loss (-) per farm	Value of family labour per farm	Net income (+) or loss (-) per farm		
						Rs.	Mds.	Rs.	Mds.						Rs.	Rs.
P U R N E A																
1948-49	120.37	1.88	122.25	7.92	15.44	29.37	0.94	(+)	14.87	(+)	8.10	(+)	120.44	17.06	(+)	1137.50
1949-50	108.00	26.63	134.63	5.55	24.25	29.31	0.50	(+)	5.56	(+)	9.05	(+)	50.31	27.25	(+)	77.56
1950-51	120.56	21.19	141.75	5.46	26.00	34.37	2.00	(+)	10.37	(+)	5.02	(+)	52.13	33.00	(-)	85.13
1951-52	134.88	49.06	183.94	6.85	26.81	45.94	2.00	(+)	21.13	(+)	7.60	(+)	160.56	33.25	(-)	193.81
1952-53	113.00	20.00	133.00	7.73	17.19	19.81	2.00	(+)	4.62	(+)	8.90	(+)	41.13	38.56	(-)	79.69
1953-54	106.00	19.69	125.69	7.37	17.06	19.69	2.00	(+)	4.63	(+)	5.71	(+)	26.37	20.00	(+)	46.37
1954-55	105.36	11.52	116.88	8.36	13.98	22.19	1.08	(+)	9.29	(+)	7.96	(+)	73.95	18.64	(+)	92.59
1955-56	107.93	13.28	121.21	8.02	15.10	21.89	0.94	(+)	7.73	(+)	9.30	(+)	71.89	24.99	(+)	96.88
1956-57	108.74	21.22	129.96	8.06	16.12	24.47	1.00	(+)	9.35	(+)	8.78	(+)	82.09	18.18	(+)	100.27
K E N D R A P A R A																
1948-49	136.13	5.06	141.19	7.32	19.31	34.06	1.88	(-)	11.63	(-)	4.14	(+)	68.88	27.19	(+)	96.07
1949-50	110.63	56.44	167.07	8.64	19.37	30.13	2.19	(+)	12.95	(+)	6.14	(+)	79.44	41.75	(+)	121.19
1950-51	99.37	47.63	147.00	6.30	23.31	35.44	1.31	(+)	13.44	(+)	5.59	(+)	75.13	44.94	(+)	120.07
1951-52	127.44	65.75	193.19	7.89	24.50	36.69	1.06	(+)	13.25	(+)	8.83	(+)	117.00	79.75	(+)	196.75
1952-53	86.69	24.19	110.88	6.41	17.25	17.13	1.00	(+)	0.88	(+)	6.94	(+)	6.06	47.75	(-)	53.81
1953-54	86.56	34.19	120.75	5.74	21.06	21.25	2.00	(+)	2.19	(+)	3.93	(+)	8.63	31.43	(-)	40.06
1954-55	86.20	39.91	126.11	7.59	16.62	28.25	1.94	(+)	13.57	(+)	5.75	(+)	78.03	37.08	(+)	115.11
1955-56	90.01	59.00	149.01	8.78	16.97	25.67	2.04	(+)	10.74	(+)	9.27	(+)	99.56	46.43	(-)	145.99
1956-57	74.02	43.08	117.10	6.33	18.50	29.22	2.17	(+)	12.89	(+)	7.34	(-)	94.61	39.56	(+)	134.17

Table 4—Average Cost of Production of and Profit and Loss on Jute

Year	Operational cost per acre	Rent per acre	Total cost per acre	Yield per acre	Cost per maund	Average price per md.	Value of jute sticks per md. of fibre	Net profit (+) or loss (-) per md.	Average output per farm	Net profit (+) or loss (-) per farm	Value of family labour per farm	Net income (+) or loss (-) per farm			
	Rs.	Rs.	Rs.	Mds.	Rs.	Rs.	Rs.	Rs.	Mds.	Rs.	Rs.	Rs.			
NOWGONG															
1948-49†	260.06	2.44	262.50	7.59	34.56	28.37	2.25	(-)	3.94	25.47	(-)	100.25	446.44	(+)	346.19
1949-50	241.31	78.00	319.31	11.28	28.31	30.50	1.75	(+)	3.94	16.37	(+)	64.50	129.19	(+)	193.69
1950-51	236.06	94.50	330.56	13.20	25.00	32.31	1.81	(+)	9.12	20.03	(+)	128.75	171.88	(+)	354.63
1951-52	301.56	64.69	366.25	10.90	33.56	49.37	2.81	(+)	18.62	15.38	(+)	286.43	183.94	(+)	470.37
1952-53	267.19	36.56	303.75	13.67	22.19	21.13	1.81	(+)	0.75	19.33	(+)	14.50	154.25	(+)	168.75
1953-54	229.25	30.19	259.44	14.97	17.31	22.06	2.56	(+)	7.31	13.53	(+)	99.00	93.31	(+)	192.31
1954-55	231.60	42.55	274.15	15.19	18.05	22.56	2.19	(+)	6.70	16.95	(+)	113.57	101.97	(+)	215.54
1955-56	228.18	35.09	263.27	12.23	21.53	22.00	2.23	(+)	2.70	19.08	(-)	51.52	122.49	(+)	114.01
1956-57	254.94	36.14	291.08	15.70	18.54	24.26	2.46	(+)	8.18	20.09	(-)	164.34	113.32	(+)	277.66
ALL CENTRES															
1948-49	234.57	5.63	240.20	8.19	29.31	30.63	1.88	(+)	3.20	11.63	(+)	37.13	156.00	(+)	193.13
1949-50	200.81	38.25	239.06	8.73	27.37	31.44	1.63	(+)	5.70	10.52	(+)	59.88	85.94	(+)	145.82
1950-51	185.63	57.37	243.00	8.43	28.81	34.31	1.81	(+)	7.31	9.07	(+)	66.31	92.38	(+)	158.69
1951-52	209.13	62.56	271.69	9.42	28.88	45.75	2.19	(+)	19.06	10.39	(+)	198.06	106.13	(+)	304.19
1952-53	193.44	31.12	224.56	10.04	22.37	20.94	1.43	(+)	0	11.17	(+)	0	93.69	(+)	93.69
1953-54	160.69	36.06	196.75	10.90	18.06	22.94	1.69	(+)	6.57	8.71	(+)	57.12	63.25	(+)	110.37
1954-55	183.31	34.24	217.54	10.95	19.87	24.88	1.59	(+)	6.60	9.95	(+)	65.67	72.78	(+)	113.45
1955-56	164.49	37.57	202.06	10.17	19.86	23.71	1.52	(+)	5.37	11.82	(+)	63.47	83.88	(+)	147.35
1956-57	152.70	27.59	180.29	8.45	21.34	25.39	1.90	(+)	5.95	8.96	(+)	53.31	59.04	(+)	112.35
SHARE CROPPERS OF BELAKOBA															
1948-49	...	...	...	...	...	...	...	...	...	...	...	...
1949-50	207.00	130.50	337.50	8.04	41.94	32.13	0.81	(-)	9.00	6.08	(-)	54.69	102.31	(+)	47.62
1950-51	168.00	149.25	317.25	8.31	38.19	35.94	0.62	(-)	1.63	7.03	(-)	85.56	85.56	(+)	74.19
1951-52	155.56	190.25	345.81	8.02	43.13	47.44	0.69	(+)	5.00	6.89	(+)	34.44	90.94	(+)	125.38
1952-53	150.94	124.50	275.44	9.94	27.69	23.13	0.75	(+)	3.81	7.99	(+)	38.19	68.63	(+)	38.19
1953-54	180.50	213.56	394.06	17.19	22.94	25.13	0.75	(+)	2.94	10.10	(+)	29.69	75.50	(+)	105.19
1954-55	153.85	121.89	275.74	9.41	29.30	27.13	0.68	(-)	1.49	5.78	(-)	8.61	61.10	(+)	52.49
1955-56	132.30	132.30	264.54	10.84	24.41	23.97	0.73	(+)	0.29	11.31	(+)	3.28	83.66	(+)	86.94
1956-57	137.50	30.57	168.07	2.73	61.56	26.53	0.47	(-)	34.56	2.72	(-)	94.00	62.33	(-)	31.67

+ For Rupohi

Table 5—Percentage Distribution of Operational Cost of Jute—contd.

Year	MONOHARPUR					BELAKOBA				
	Human labour	Cattle labour	Seed	Manure	Total	Human labour	Cattle labour	Seed	Manure	Total
1948-49	82.5	10.0	3.2	4.3	100.0	61.1	25.6	5.1	8.2	100.0
1949-50	85.1	7.1	3.8	4.0	100.0	72.6	10.9	6.9	9.6	100.0
1950-51	79.4	10.3	4.1	6.2	100.0	76.2	12.9	5.1	5.8	100.0
1951-52	81.7	9.2	5.3	3.8	100.0	71.7	12.6	10.1	5.6	100.0
1952-53	88.1	6.0	2.6	3.3	100.0	62.4	13.4	12.2	12.0	100.0
1953-54	78.5	8.9	5.9	6.7	100.0	70.1	11.6	7.2	11.1	100.0
1954-55	88.8	4.8	2.6	3.8	100.0	64.4	15.4	6.0	14.2	100.0
1955-56	88.6	6.1	3.0	2.3	100.0	67.3	14.2	6.9	11.6	100.0
1956-57	80.7	8.5	4.5	6.3	100.0	47.3	15.9	7.6	29.2	100.0
Year	PURNEA					KENDRAPARA				
	Human labour	Cattle labour	Seed	Manure	Total	Human labour	Cattle labour	Seed	Manure	Total
1948-49	76.1	19.8	4.1	—	100.0	61.1	33.6	2.3	3.0	100.0
1949-50	75.7	19.5	4.8	—	100.0	75.2	15.5	3.2	4.8	100.0**
1950-51	78.3	18.0	3.7	—	100.0	77.8	12.5	2.5	5.9	100.0**
1951-52	79.9	16.3	2.9	0.9	100.0	84.0	6.5	3.6	5.9	100.0
1952-53	78.5	19.4	1.8	0.3	100.0	77.1	11.6	5.3	6.0	100.0
1953-54	77.2	20.2	2.1	0.5	100.0	79.5	11.4	3.2	5.9	100.0
1954-55	77.8	18.7	3.2	0.2	100.0	81.6	9.5	3.5	5.4	100.0
1955-56	78.2	18.7	3.1	—	100.0	79.0	9.3	3.0	8.7	100.0
1956-57	80.6	17.2	1.6	0.6	100.0	72.2	9.5	4.1	14.2	100.0

* Including cost of insecticide—0.1%.

** Including water tax—1.3%.

Table 5—Percentage Distribution of Operational Cost of Jute

Year	NOW GONG						ALL CENTRES					
	Human labour	Cattle labour	Seed	Manure	Total		Human labour	Cattle labour	Seed	Manure	Total	
1948-49	92.71	5.8†	1.5†	—	100.0†		84.8	10.8	2.5	1.9	100.0	
1949-50	87.7	7.6	4.6	0.1	100.0		81.8	10.3	4.7	3.1	100.0**	
1950-51	88.8	9.0	2.2	—	100.0		82.4	11.2	3.3	3.0	100.0**	
1951-52	89.4	7.2	2.6	0.8	100.0		83.0	9.7	4.5	2.8	100.0	
1952-53	88.3	9.0	2.7	—	100.0		82.4	10.3	4.1	3.2	100.0	
1953-54	86.7	10.7	1.8	0.8	100.0		79.2	11.8	4.1	4.9	100.0	
1954-55	83.1	11.3	5.2	0.3	100.0*		80.8	10.6	4.2	4.3	100.0*	
1955-56	85.6	12.2	1.7	0.5	100.0		81.5	11.8	3.2	3.5	100.0	
1956-57	87.5	10.4	1.5	0.6	100.0		75.2	12.5	3.4	8.9	100.0	

Year	SHARE CROPPERS OF BELAKOBA					
	Human labour	Cattle labour	Seed	Manure	Total	
1948-49	—	—	—	—	—	
1949-50	71.8	10.7	7.0	10.5	100.0	
1950-51	76.2	13.0	4.6	6.2	100.0	
1951-52	70.8	12.9	10.6	5.7	100.0	
1952-53	62.1	13.7	12.3	11.9	100.0	
1953-54	71.2	11.5	6.5	10.8	100.0	
1954-55	65.1	15.0	5.7	14.2	100.0	
1955-56	64.9	15.3	7.3	12.5	100.0	
1956-57	46.3	16.7	7.9	29.1	100.0	

† For Rupohi

* Including cost of insecticide—0.1%

** Including water tax—0.1%

Table 6—Operation-wise Distribution of Human Labour
employed in Jute Cultivation—contd.
(Mandays per acre)

Year	Irrigation	Ploughing	Manuring	Sowing	Weeding	Cutting	Steeping	Stripping	Drying	All operations
MONOHARPUR										
1948-49	...	13.5	6.6	3.0	39.3	12.9	13.2	27.6	7.5	123.6
1949-50	...	8.1	3.6	1.5	47.7	12.9	14.1	21.9	6.0	115.8
1950-51	...	9.0	5.4	1.5	33.3	5.4	5.1	7.5	1.8	69.0
1951-52	...	6.2	4.6	3.2	43.1	10.3	9.9	17.7	3.3	98.3
1952-53	...	7.0	7.1	1.5	47.1	11.9	11.2	20.9	3.5	110.2
1953-54	...	7.3	4.4	1.2	23.2	6.6	6.9	11.7	2.1	63.4
1954-55	...	7.8	3.9	1.3	53.8	14.7	13.1	23.7	4.5	122.8
1955-56	...	9.1	3.8	1.5	49.5	9.5	9.4	15.5	4.5	102.8
1956-57	...	10.3	3.6	1.7	37.0	8.2	6.0	11.3	2.9	81.0
BELAKOBA										
1948-49	...	14.4	3.9	3.3	19.5	7.2	2.7	4.8	2.1	57.9
1949-50	...	12.0	4.8	3.9	31.5	8.7	3.3	12.0	1.5	77.7
1950-51	...	12.0	3.3	4.2	28.5	9.6	2.1	12.3	1.2	73.2
1951-52	...	16.4	1.3	0.6	18.2	8.2	1.4	9.5	0.8	56.4
1952-53	...	16.2	1.3	0.7	17.5	9.6	1.2	8.2	1.2	55.9
1953-54	...	16.3	1.5	0.5	18.3	13.4	1.3	15.3	1.5	68.1
1954-55	...	19.6	1.5	0.5	16.8	10.2	0.7	8.6	0.8	58.7
1955-56	...	17.2	1.2	0.4	12.9	10.8	0.8	10.5	1.0	54.8
1956-57	...	15.7	1.5	3.2	13.4	4.2	0.3	3.6	0.4	42.3
PURNEA										
1948-49	...	17.4	Nil	2.1	22.8	17.4	3.0	12.6	1.2	76.5
1949-50	...	15.6	Nil	2.4	21.9	9.9	0.9	8.1	0.9	59.7
1950-51	...	15.9	+	2.1	13.8	10.2	1.5	9.9	0.6	54.0
1951-52	...	16.0	0.1	2.2	14.7	11.0	1.6	9.6	0.9	56.1
1952-53	...	16.1	+	2.2	14.1	12.1	1.4	10.3	1.1	57.3
1953-54	...	15.3	+	2.1	17.1	11.2	1.6	11.1	1.0	59.4
1954-55	...	14.2	+	2.1	17.9	13.0	1.7	12.1	1.2	62.2
1955-56	...	14.6	+	3.1	17.9	13.2	2.2	12.2	1.1	64.3
1956-57	...	13.4	+	2.7	16.0	12.5	1.7	9.8	1.3	57.4
KENDRAPARA										
1948-49	%	18.3*	*	1.8	30.3	11.7	16.5	22.2	4.2	105.0
1949-50	1.8	11.1*	*	1.2	27.9	11.4	8.7	13.8	4.2	80.1
1950-51	1.5	10.5	1.8	0.6	27.3	7.2	6.3	9.6	2.4	67.2
1951-52	1.0	6.7	2.2	2.2	30.2	9.1	9.4	11.6	3.1	75.5
1952-53	1.1	8.2	1.7	2.5	18.3	5.0	5.2	6.1	2.0	50.1
1953-54	0.9	8.6	1.7	3.0	18.4	6.6	6.9	10.6	2.0	58.7
1954-55	1.0	7.2	1.3	2.4	23.2	9.8	9.5	12.0	4.1	70.5
1955-56	1.7	7.2	2.2	2.3	24.7	9.2	8.4	10.1	3.4	69.2
1956-57	1.3	6.2	1.7	2.3	14.4	6.3	7.0	7.4	2.5	49.1

+ Negligible

% Ploughing includes irrigation

* Including manuring

*Table 6—Operation-wise Distribution of Human Labour
employed in Jute Cultivation
(Mandays per acre)*

Year	Irrigation	Ploughing	Manuring	Sowing	Weeding	Cutting	Steeping	Stripping	Drying	All operations
N O W G O N G										
1948-49†	...	13·2*	§	4·5	40·8	9·9	2·1	9·0	2·4	81·9
1949-50	...	12·0*	*	2·4	48·3	12·6	5·7	17·4	3·3	101·7
1950-51	...	11·1	Nil	2·1	41·4	13·2	6·3	18·0	4·2	96·3
1951-52	...	10·6	0·2	2·4	38·6	11·7	5·5	14·8	3·2	87·0
1952-53	...	11·3	Nil	2·5	34·4	16·2	6·2	13·0	5·2	88·8
1953-54	...	12·5	0·3	2·2	32·0	14·4	9·9	17·2	4·2	92·7
1954-55	...	12·2	0·6	2·3	30·6	12·3	7·3	17·5	4·3	87·1
1955-56	...	15·5	0·2	2·6	34·0	11·9	5·0	16·1	3·2	88·5
1956-57	...	12·0	0·5	2·6	30·4	12·2	7·8	17·5	4·0	87·0
A L L C E N T R E S										
1948-49	§	15·9*	§	3·6	34·5	11·1	5·1	12·6	3·0	85·8
1949-50	0·3	13·5*	*	2·1	34·8	10·8	5·7	13·8	2·7	83·7
1950-51	0·3	11·4	1·8	2·1	30·9	9·6	4·5	12·3	2·4	75·3
1951-52	0·2	11·7	1·3	2·1	28·3	10·2	5·1	12·3	2·2	73·4
1952-53	0·2	12·0	1·7	1·9	26·3	11·6	4·9	11·7	2·7	73·0
1953-54	0·1	12·2	1·5	1·7	22·3	10·9	5·3	13·6	2·2	69·8
1954-55	0·2	12·5	1·4	1·7	28·5	12·0	6·3	14·9	3·1	80·6
1956-56	0·3	13·3	1·2	2·0	27·3	11·1	4·9	13·1	2·6	75·8
1956-57	0·3	11·9	1·0	2·7	19·8	8·9	4·3	9·8	2·1	60·8
S H A R E C R O P P E R S O F B E L A K O B A										
1949-50	...	11·4	5·1	4·2	35·7	7·2	3·0	11·4	1·2	79·2
1950-51	...	12·3	3·3	4·8	28·2	8·7	1·8	11·1	0·9	71·1
1951-52	...	16·5	1·5	0·6	16·3	8·1	1·4	9·6	0·8	54·8
1952-53	...	16·9	1·3	0·7	17·9	9·0	1·3	7·8	1·2	56·1
1953-54	...	16·4	1·5	0·5	19·4	13·7	1·3	16·3	1·5	70·6
1954-55	...	18·9	1·6	0·5	16·3	10·2	0·8	8·3	0·8	57·4
1955-56	...	16·3	1·1	0·4	12·2	8·9	0·7	9·4	1·0	50·0
1956-57	...	15·8	1·6	3·3	12·4	3·5	0·2	3·1	0·3	40·2

† For Rupohi

* Including manuring

§ Ploughing includes irrigation

Table 7—Total Input of Cattle Labour for Jute Cultivation
(Cattledays per acre)

Year	Monoharpur	Belakoba	Purnea	Kendrapara	Nowgong	All centres
1948-49	24·3	61·2	59·1	53·1	41·1*	48·3
1949-50	19·8	52·8	51·0	36·0	36·3	40·2
1950-51	20·1	52·8	52·2	26·1	35·1	36·3
1951-52	23·5	48·7	52·7	22·7	35·1	38·0
1952-53	16·2	48·3	52·7	28·9	37·8	37·9
1953-54	15·6	48·7	51·3	31·5	39·3	38·1
1954-55	15·4	57·9	46·8	26·1	41·3	38·5
1955-56	15·2	50·9	47·8	26·7	44·9	39·0
1956-57	19·0	54·0	45·3	22·4	42·4	40·4

* For Rupohi

Table 8—Labour Rate for Jute
(Rs. per day)

Year	Monoharpur		Belakoba		Purnea		Kendrapara		Nowgong	
	Wage rate	Cattle hire rate	Wage rate	Cattle hire rate	Wage rate	Cattle hire rate	Wage rate	Cattle hire rate	Wage rate	Cattle hire rate
1948-49	2·19	1·38	2·06	0·81	1·19	0·41	0·81	0·82	2·94*	0·31*
1949-50	2·53	1·24	1·86	0·41	1·37	0·42	1·01	0·58	2·08	0·51
1950-51	2·75	1·22	1·78	0·41	1·75	0·41	1·16	0·47	2·19	0·59
1951-52	2·75	1·30	2·06	0·41	1·91	0·42	1·42	0·38	3·11	0·63
1952-53	2·67	1·24	1·69	0·42	1·55	0·42	1·33	0·35	2·66	0·64
1953-54	2·14	0·98	1·81	0·42	1·37	0·42	1·17	0·31	2·16	0·63
1954-55	2·19	0·94	1·72	0·42	1·31	0·42	1·00	0·31	2·20	0·64
1955-56	2·04	0·95	1·75	0·40	1·31	0·42	1·03	0·32	2·21	0·62
1956-57	2·15	0·96	1·58	0·42	1·53	0·41	1·09	0·31	2·56	0·62

* For Rupohi

Table 9—Sowing Rate and Price of Jute Seeds

Year	Monoharpur			Belakoba			Purnea			Kendrapara			Nowgong			All centres		
	Seers per acre	Rs. per seer		Seers per acre	Rs. per seer		Seers per acre	Rs. per seer		Seers per acre	Rs. per seer		Seers per acre	Rs. per seer		Seers per acre	Rs. per seer	
1948-49	5.7	1.88		7.5	1.37		4.2	1.19		3.6	0.88		10.2†	0.37†		8.1	0.75	
1949-50	6.6	2.00		9.9	1.37		3.6	1.44		4.2	0.81		7.8	1.44		6.3	1.50	
1950-51	6.8	1.44		8.3	1.00		3.7	1.19		3.4	0.75		6.9	0.75		6.0	1.00	
1951-52	9.7	1.81		7.7	2.05		3.7	1.06		4.2	1.13		6.6	1.19		6.2	1.63	
1952-53	5.8	1.50		9.0	2.06		4.1	0.50		3.6	1.03		6.6	1.06		6.0	1.31	
1953-54	7.1	1.44		8.6	1.50		4.2	0.50		3.6	0.75		6.4	0.69		6.1	1.06	
1954-55	5.4	1.48		7.0	1.34		3.7	0.91		3.9	0.78		5.6	2.17		5.2	1.48	
1955-56	5.8	1.25		6.4	1.54		3.7	0.93		3.5	0.77		6.9	0.57		5.4	0.98	
1956-57	5.8	1.69		6.4	1.67		3.7	0.47		3.5	0.89		6.5	0.60		5.1	1.01	

Table 10—Doses and Price of Manure applied on Jute Plots

Year	Monoharpur			Belakoba			Purnea			Kendrapara			Nowgong			All centres			Share croppers of Belakoba		
	Mds. per acre	Rs. per md.		Mds. per acre	Rs. per md.		Mds. per acre	Rs. per md.		Mds. per acre	Rs. per md.		Mds. per acre	Rs. per md.		Mds. per acre	Rs. per md.		Mds. per acre	Rs. per md.	
1948-49	39.3	0.44		62.4	0.25		...	...		21.9	0.19		...	...		15.3	0.31		...	...
1949-50	37.2	0.37		111.3	0.19		...	...		26.7	0.19		0.6	0.25		27.0	0.25		117.6	0.19	
1950-51	40.4	0.37		80.6	0.13		0.31	0.25		23.5	0.25		...	...		25.0	0.22		83.0	0.13	
1951-52	33.7	0.37		67.5	0.13		0.28	0.25		29.5	0.25		2.2	1.06		25.6	0.23		70.6	0.13	
1952-53	28.9	0.37		73.1	0.25		0.25	0.25		10.9	0.25		...	...		22.3	0.28		71.9	0.25	
1953-54	32.0	0.37		78.5	0.25		0.25	0.39		13.2	0.39		3.3	0.54		26.6	0.30		78.8	0.25	
1954-55	29.2	0.39		89.9	0.25		0.25	0.38		12.6	0.38		2.1	0.38		27.2	0.30		88.5	0.25	
1955-56	13.8	0.40		64.5	0.26		0.25	0.43		18.4	0.43		1.8	0.64		18.8	0.31		62.5	0.26	
1956-57	45.8	0.30		82.7	0.50		0.25	0.69		15.3	0.69		5.2	0.31		27.7	0.49		80.4	0.50	

† For Rupohi

Negligible

Table 11 — Analysis of Operational Cost of Jute—contd.

(Rs. per acre)

Year	Farm	Paid		Total	Total operational cost
		Cash	Kind		
MONOHARPUR					
1948-49	195-94			135-00	330-94
1949-50	164-06	181-50	...	181-50	345-56
1950-51	141-75	97-31	...	97-31	239-06
1951-52	215-25	113-56	...	113-56	328-81
1952-53	193-25	140-06	...	140-06	333-31
1953-54	123-81	48-63	...	48-63	172-44
1954-55	157-31	145-81	...	145-81	303-12
1955-56	160-33	75-92	...	75-92	236-25
1956-57	142-52	72-81	...	72-81	215-33
BELAKOBA					
1948-49	176-81			17-06	193-87
1949-50	174-56	12-56	12-38	24-94	199-50
1950-51	144-00	15-56	12-56	28-12	172-12
1951-52	132-50	21-69	7-25	28-94	161-44
1952-53	125-13	20-06	6-06	26-12	151-25
1953-54	162-75	12-69	0-69	13-38	176-13
1954-55	150-94	5-87	0-44	6-31	157-25
1955-56	129-55	10-08	2-56	12-64	142-19
1956-57	135-87	5-73	0-12	5-85	141-72
PURNEA					
1948-49	39-94			80-44	120-38
1949-50	39-37	36-00	32-63	68-63	108-00
1950-51	60-19	24-56	35-81	60-37	120-56
1951-52	56-19	27-56	51-13	78-69	134-88
1952-53	57-69	25-50	29-81	55-31	113-00
1953-54	49-69	27-62	28-69	56-31	106-00
1954-55	42-13	25-87	37-38	63-25	105-38
1955-56	44-31	31-99	31-63	63-62	107-93
1956-57	37-54	35-42	35-78	71-20	108-74
KENDRAPARA					
1948-49	100-69			35-44	136-13
1949-50	83-63	25-31	1-69	27-00	110-63
1950-51	71-44	25-69	2-25	27-94	99-38
1951-52	90-75	36-69	...	36-69	127-44
1952-53	64-00	22-69	...	22-69	86-69
1953-54	63-62	17-31	5-63	22-94	86-56
1954-55	64-75	16-75	4-69	21-44	86-19
1955-56	61-95	18-95	9-11	28-06	90-01
1956-57	51-02	18-58	4-42	23-00	74-02

* Not available

Table 11—Analysis of Operational Cost of Jute
(Rs. Per acre)

Year	Farm	Paid		Total	Total operational cost
		Cash	Kind		
NOWGONG					
1948-49	151.50	*	*	108.56	260.06
1949-50	106.50	115.50	19.31	134.81	241.31
1950-51	134.43	82.88	18.75	101.63	236.06
1951-52	155.50	122.25	23.81	146.06	301.56
1952-53	134.38	106.37	26.44	132.81	267.19
1953-54	128.81	82.50	17.94	100.44	229.25
1954-55	118.13	93.94	19.50	113.44	231.57
1955-56	106.46	97.64	24.08	121.72	228.18
1956-57	115.19	107.85	31.90	139.75	254.94
ALL CENTRES					
1948-49	142.31			92.25	234.56
1949-50	103.31	75.94	16.12	92.06	195.37
1950-51	115.13	56.25	14.25	70.50	185.63
1951-52	125.94	64.38	18.81	83.19	209.13
1952-53	114.25	64.56	14.63	79.19	193.44
1953-54	109.75	39.94	11.00	50.94	160.69
1954-55	110.31	60.38	12.62	73.00	183.31
1955-56	99.46	50.08	14.95	65.03	164.49
1956-57	90.02	45.26	17.42	62.68	152.70
SHARE CROPPERS OF BELAKOBA					
1949-50	190.31	6.94	9.75	16.69	207.00
1950-51	141.19	18.00	8.81	26.81	168.00
1951-52	145.31	9.19	1.06	10.25	155.56
1952-53	136.00	7.75	7.19	14.94	150.94
1953-54	177.50	3.00	...	3.00	180.50
1954-55	152.13	1.25	0.50	1.75	153.88
1955-56	120.11	8.24	3.89	12.13	132.24
1956-57	135.28	2.22	...	2.22	137.50

† For Rupohi

* Not available

Table 12—Comparative Estimates of Yield of Jute
(Mds. per acre)

Year	Crop cutting experiments		Farm investigation*
	Cut area	Whole plot	
MONOHARPUR			
1953-54	12·81	14·53	11·18
1954-55	12·43	12·34	13·53
1955-56	10·65	12·00	9·21
1956-57	7·46	6·15	6·15
BELAKOBA			
1953-54	19·75	20·19	16·62
1954-55	14·04	14·07	10·50
1955-56	14·64	12·95	11·94
1956-57	10·74	9·17	6·48
PURNEA			
1953-54	9·63	6·98	8·72
1954-55	9·12	10·25	9·42
1955-56	10·43	10·42	9·03
1956-57	11·36	11·01	9·24
KENDRAPARA			
1953-54	13·28	13·96	9·70
1954-55	14·05	12·62	8·28
1955-56	14·69	11·95	8·83
1956-57	9·58	9·44	7·63
NOWGONG			
1953-54	15·18	16·21	15·44
1954-55	15·22	16·44	15·54
1955-56	11·72	11·82	12·65
1956-57	17·61	14·63	16·05
ALL CENTRES			
1953-54	14·13	14·46	13·17
1954-55	12·97	13·49	11·91
1955-56	12·40	11·83	10·62
1956-57	11·35	10·08	10·43

* For comparison, the area on which jute totally failed has been excluded.

*Table 13—Comparison of the Forecast and Actual Mandays and
Yield per Acre for Jute
(Combined for five centres)*

Year	Mandays per acre (actual)		Yield per acre (Mds.)		Ratio between		Forecast	
	Pre-harvesting operations	Harvesting & post-harvesting operations	Total	(Actual)	Col. (3) and Col. (2)	Col. (5) and Col. (4)	Total mandays per acre*	Yield per acre** (Mds.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1948-49	54.0	31.8	85.8	8.2	0.59	0.100	...	...
1949-50	50.7	33.0	83.7	8.7	0.65	0.104	80.6	8.1
1950-51	46.5	28.8	75.3	8.4	0.62	0.112	76.7	8.0
1951-52	43.6	29.8	73.4	9.4	0.68	0.128	70.6	7.9
1952-53	42.1	30.9	73.0	10.0	0.73	0.138	70.7	9.1
1953-54	37.8	32.0	69.8	10.9	0.85	0.156	65.4	9.0
1954-55	44.3	36.3	80.6	11.0	0.82	0.136	82.0	12.8
1955-56	44.1	31.7	75.8	10.2	0.72	0.134	80.3	10.9
1956-57	35.7	25.1	60.8	8.5	0.70	0.139	61.4	8.2

* Col. (2) of the forecast year - Col. (2) of the forecast year × Col. (6) of the previous year

** Col (8) of the forecast year × Col. (7) of the previous year

Table 14—Area under Different varieties of Paddy
(Acre per farm)

Year	Monoharpur			Belakoba			Purnea					
	Bd.aman	Tr.aman	Total	Aus	Bd.aman	Tr.aman	Total	Aus	Aus-aman	Bd.aman	Tr.aman	Total
1948-49	0.54	1.81	2.35	0.58	1.38	2.84	4.80	1.22	0.15	0.41	1.89	3.67
1949-50	0.41	1.80	2.21	0.54	1.53	3.06	5.13	1.15	...	0.39	2.02	3.56
1950-51	0.75	1.55	2.30	0.31	0.84	3.35	4.50	0.81	0.10	0.37	2.16	3.44
1951-52	0.65	1.32	1.97	0.58	0.57	3.49	4.64	1.21	0.09	0.76	0.35	2.41
1952-53	0.48	1.38	1.86	0.63	0.97	3.29	4.89	1.75	0.11	0.28	0.46	2.60
1953-54	0.63	1.52	2.18*	0.72	0.81	3.33	4.86	1.83	0.13	0.27	1.19	3.42
1954-55	0.54	1.09	1.65**	0.70	0.60	2.96	4.26	1.58	0.09	0.17	1.57	3.41
1955-56	0.50	1.62	2.12	0.70	0.79	3.39	4.88	1.40	0.13	0.12	1.35	3.00
1956-17	0.05	1.99	2.04	0.60	0.50	3.61	4.71	1.05	0.06	0.06	1.12	2.29

Year	Kendrapara			Nowgong			All centres						
	Aus	Bd. aman	Tr. aman	Total	Aus-aman	Bd. aman	Tr. aman	Total	Aus	Aus-aman	Bd. aman	Tr. aman	Total
1948-49	0.19	2.36	2.07	4.62	3.28†	0.47†	6.45†	10.20+	1.15	0.03	0.94	3.13	5.25
1949-50	0.04	1.04	2.28	3.36	0.58	0.56	0.80	2.02	0.47	0.02	0.70	2.06	3.25
1950-51	0.11	1.15	2.94	4.20	0.50	0.51	1.06	2.16	0.37	0.04	0.71	2.17	3.29
1951-52	...	2.78	1.58	4.36	0.73	0.50	1.06	2.37	0.53	0.04	0.99	1.56	3.12
1952-53	0.13	1.12	3.44	4.69	0.75	0.51	0.94	2.25	0.68	0.03	0.66	1.86	3.23
1953-54	0.06	2.30	1.99	4.35	1.07	0.44	0.82	3.02	0.75	0.11	0.96	1.72	3.54
1954-55	0.06	0.94	3.09	4.09	0.89	0.18	0.52	2.50	0.69	0.05	0.54	1.95	3.23
1955-56	0.01	1.42	2.62	4.05	0.71	0.12	0.40	2.23	0.58	0.05	0.64	2.03	3.30
1956-57	0.03	1.35	2.83	4.21	0.58	0.32	0.98	2.10	0.46	0.08	0.43	2.12	3.09

Bd. -- Broadcast ; Tr. -- Transplanted			* Including 0.03 acre under aus		** Including 0.02 acre under aus		† For Rupohi	
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Bd.—Broadcast ; Tr.—Transplanted * Including 0.03 acre under aus ** Including 0.02 acre under aus † For Rupohi

Table 16—Percentage Distribution of Operational Cost of Paddy Cultivation
(All varieties combined)

Year	Human labour	Cattle labour	Seed	Manure	Human labour	Cattle labour	Seed	Manure
MONOHARPUR					BELAKOBA			
1948-49	*	*	*	*	*	*	*	*
1949-50	76.95	13.41	9.64	...	66.02	16.41	17.57	...
1950-51	78.16	12.74	9.10	...	59.24	17.50	23.26	...
1951-52	75.21	11.66	13.13	...	61.33	14.49	22.50	1.68
1952-53	76.50	10.80	12.40	0.30	58.20	18.70	21.50	1.60
1953-54	75.20	11.00	12.60	1.20	58.30	17.00	23.80	0.90
1954-55	76.30	12.90	10.00	0.80	61.00	19.30	19.70	†
1955-56	78.15	13.45	7.59	0.81	59.34	19.21	21.18	0.27
1956-57	74.44	14.28	10.65	0.63	53.59	22.13	24.28	...
PURNEA					KENDRAPARA			
1948-49	*	*	*	*	*	*	*	*
1949-50	67.66	18.79	13.55	...	64.82	21.64	9.41	4.13
1950-51	62.99	19.17	17.84	...	75.29	11.11	10.41	3.19
1951-52	58.07	22.34	19.33	0.26	78.20	9.09	8.26	4.45
1952-53	60.00	20.50	19.50	...	75.40	11.70	8.80	4.10
1953-54	60.00	23.60	16.40	...	79.20	10.40	8.30	2.10
1954-55	60.00	25.10	14.90	...	77.30	9.50	10.80	2.40
1955-56	61.47	21.78	16.75	...	75.73	9.46	9.19	5.62
1956-57	62.08	20.49	17.43	...	75.65	8.56	11.05	4.74
NOWGONG					ALL CENTRES			
1948-49†	*	*	*	*	69.60	15.10	14.90	0.40
1949-50	69.89	16.54	13.78	...	69.93	16.51	13.25	0.31
1950-51	71.78	17.25	10.97	...	68.58	16.20	15.01	0.21
1951-52	70.97	13.05	15.90	0.08	68.06	14.11	16.91	0.92
1952-53	70.00	16.50	13.50	...	66.50	16.30	16.30	0.90
1953-54	67.30	19.30	13.30	0.10	66.40	17.00	15.90	0.70
1954-55	69.10	21.20	9.70	...	66.90	19.10	13.70	0.30
1955-56	67.44	21.20	11.36	†	67.24	17.89	14.12	0.75
1956-57	71.46	19.36	9.18	...	66.17	18.07	15.12	0.64

* Not calculated

† Negligible

‡ For Rupohi

Table 16A—Percentage Distribution of Operational Cost in each Variety of Paddy
(All centres combined)

Year	Human labour	Cattle labour	Seed	Manure	Human labour	Cattle labour	Seed	Manure
	A U S				A U S - A M A N			
1948-49	*	*	*	*	*	*	*	*
1949-50	66·24	18·70	15·05	0·01	72·90	16·99	10·11	...
1950-51	65·20	20·29	14·51	...	69·30	19·20	11·50	...
1951-52	62·80	16·91	18·88	1·41	64·90	16·61	18·49	...
1952-53	63·00	19·90	16·30	0·80	66·80	18·60	14·60	..
1953-54	62·10	23·10	14·70	0·10	68·40	20·20	11·40	...
1954-55	64·50	24·40	11·10	†	67·80	22·20	10·00	...
1955-56	63·01	25·08	11·91	†	65·44	21·38	12·73	...
1956-57	64·17	24·10	11·69	0·04	68·14	21·33	10·53	...
	BROADCAST AMAN				TRANSPLANTED AMAN			
1948-49	*	*	*	*	*	*	*	*
1949-50	63·64	22·11	14·25	...	72·13	14·79	12·63	0·45
1950-51	69·38	17·80	12·78	0·04	69·06	14·78	15·86	0·30
1951-52	67·67	14·86	16·38	1·09	70·47	12·60	16·26	0·67
1952-53	63·40	18·20	16·80	1·60	69·30	13·80	16·30	0·60
1953-54	67·90	16·10	15·50	0·50	67·80	13·80	17·20	1·20
1954-55	68·20	19·20	12·50	0·10	67·70	16·20	15·50	0·60
1955-56	72·18	16·98	10·45	0·39	67·56	15·50	15·81	1·13
1956-57	67·07	18·67	14·15	0·11	66·50	16·02	16·56	0·92

* Not calculated

† Negligible

Table 17—Input of Human Labour in Paddy Cultivation
(Mandays per acre)

Year	MONOHARPUR				BELAKOBA				PURNEA					
	Aus	Bd. aman	Tr. aman	Com- bined	Aus	Bd. aman	Tr. aman	Com- bined	Aus	Aus- aman	Bd. aman	Tr. aman	Com- bined	
1948-49	...	71.13	69.36	69.78	25.02	18.48	41.10	32.64	55.68	73.86	37.44	44.88	48.84	
1949-50	...	23.49	77.97	67.89	22.50	18.24	29.73	25.56	48.33	...	34.56	37.65	40.77	
1950-51	...	43.17	49.47	47.40	23.37	20.88	28.53	26.73	42.15	56.10	28.80	38.25	38.67	
1951-52	...	54.65	48.83	50.74	24.72	22.33	27.54	26.55	43.66	37.71	36.72	34.18	39.88	
1952-53	...	51.58	50.21	50.56	25.30	24.36	27.97	26.91	40.78	54.86	45.61	27.96	39.60	
1953-54	44.77	49.96	52.69	51.81	28.70	20.78	27.52	26.59	42.77	51.45	40.03	37.76	41.49	
1954-55	62.48	53.33	50.29	51.42	28.84	22.26	26.42	26.23	41.97	60.91	37.54	38.60	40.67	
1955-56	...	64.10	53.62	56.09	25.11	18.82	26.25	24.89	39.50	64.88	32.26	33.73	37.67	
1956-57	...	36.39	42.52	42.38	23.70	16.12	28.49	26.57	42.19	49.62	32.07	36.22	39.23	
Year	KENDRAPARA				NOWGONG				ALL CENTRES					
	Aus	Bd. aman	Tr. aman	Com- bined	Aus	Aus- aman	Bd. aman	Tr. aman	Com- bined	Aus	Aus- aman	Bd. aman	Tr. aman	Com- bined
1948-49	35.76	34.47	51.81	42.21	48.93	...	27.48	32.46	37.53	47.49	73.86	32.85	41.82	41.64
1949-50	60.48	...	58.14	58.17	43.80	54.75	35.76	42.15	40.50	41.13	54.75	24.03	46.23	40.89
1950-51	54.30	39.84	46.29	44.55	48.12	50.43	31.23	36.30	38.43	40.86	53.34	31.98	37.17	36.81
1951-52	...	54.17	54.63	54.48	47.60	51.37	28.22	38.60	39.64	40.46	43.88	38.84	36.64	38.01
1952-53	34.34	27.68	53.32	45.80	46.53	56.22	20.91	35.62	36.35	38.92	55.28	31.21	36.79	36.40
1953-54	36.18	44.80	51.08	47.67	45.99	50.12	27.98	43.36	41.08	41.10	50.44	35.88	38.66	39.09
1954-55	27.39	40.87	53.21	50.27	48.49	63.28	30.51	40.15	42.74	40.82	62.46	35.25	37.32	38.35
1955-56	51.79	44.09	49.76	47.79	45.42	52.65	26.54	37.35	38.83	37.18	59.29	35.73	36.46	36.88
1956-57	43.62	44.15	48.48	47.06	46.96	53.45	23.59	39.12	41.84	38.18	52.78	29.54	36.11	36.26

Bd. = Broadcast

Tr. = Transplanted

Table 18—Input of Cattle Labour in Paddy Cultivation
(Cattledays per acre)

Year	MONOHARPUR				BELAKOBA				PURNEA				
	Aus	Bd. aman	Tr. aman	Combined	Aus	Bd. aman	Tr. aman	Combined	Aus	Aus- aman	Bd. aman	Tr. aman	Com- bined
1948-49	...	20.97	24.63	23.73	53.76	27.93	43.98	40.53	55.86	53.10	56.31	35.85	45.48
1949-50	...	24.90	25.95	25.74	44.43	30.09	32.34	32.94	54.15	...	43.08	36.48	42.69
1950-51	...	13.14	19.14	17.19	45.30	37.47	31.11	33.30	52.17	55.02	49.23	34.77	40.98
1951-52	...	13.93	18.43	16.95	49.34	35.63	31.32	34.09	52.20	49.21	50.01	33.00	48.63
1952-53	...	11.41	15.84	14.70	46.81	44.18	31.53	36.00	49.92	57.49	54.69	23.01	45.97
1953-54	12.06	12.86	17.24	15.92	52.38	36.30	29.83	34.25	52.58	54.14	51.43	36.74	47.04
1954-55	22.76	13.19	20.05	17.83	55.74	42.18	28.90	35.16	52.08	56.43	49.45	33.13	43.33
1955-56	...	13.76	23.25	21.01	50.65	32.50	30.57	33.75	48.79	56.11	48.81	31.91	41.48
1956-57	...	16.55	18.87	18.90	51.28	27.58	32.55	34.44	49.57	47.04	46.23	33.63	41.65

Year	KENDRAPARA				NOWGONG				ALL CENTRES					
	Aus	Bd. aman	Tr. aman	Combined	Aus	Aus- aman	Bd. aman	Tr. aman	Com- bined	Aus	Aus- aman	Bd. aman	Tr. aman	Com- bined
1948-49	28.56	44.25	22.53	33.87	41.46	...	34.02	13.98	23.73	45.84	53.10	36.36	24.93	31.62
1949-50	39.05	...	28.56	28.68	46.44	57.18	42.09	32.40	40.08	49.44	57.18	33.45	31.50	34.95
1950-51	16.56	19.20	17.88	18.24	44.01	53.70	33.39	26.55	33.36	48.18	54.39	29.91	28.20	31.44
1951-52	...	27.46	19.75	22.34	43.28	43.46	29.98	30.38	34.71	48.95	46.61	32.57	27.55	33.25
1952-53	13.58	22.01	22.23	21.99	47.56	64.13	25.31	29.25	35.23	48.41	59.54	32.63	26.41	33.43
1953-54	12.26	30.40	19.68	25.17	51.40	53.11	24.15	34.89	40.48	51.75	53.36	28.64	27.73	34.82
1954-55	17.78	25.30	21.78	22.58	51.97	72.97	39.48	36.58	45.23	52.69	67.27	33.23	28.62	36.03
1955-56	39.17	23.73	18.78	21.11	57.20	64.14	26.20	31.95	40.74	51.21	59.78	26.98	28.19	33.24
1956-57	17.03	20.48	19.99	20.94	56.12	60.90	33.20	35.33	44.73	51.55	58.49	28.49	27.13	33.27

Table 19—Operational Cost of Paddy Cultivation
(Rupees per acre)

Year	MONOHARPUR				BELAKOBA				PURNEA				
	Aus	Bd. aman	Tr. aman	Combined	Aus	Bd. aman	Tr. aman	Combined	Aus	Aus-aman	Bd. aman	Tr. aman	Com- bined
1948-49	...	231.19	231.00	231.00	105.94	67.50	128.81	108.37	94.88	113.81	82.50	77.25	85.31
1949-50	...	87.00	215.63	191.81	77.63	57.94	88.50	78.19	111.75	...	82.69	87.56	94.88
1950-51	...	144.56	181.88	169.69	75.75	62.25	83.06	78.75	100.69	121.88	80.44	84.75	89.06
1951-52	...	179.13	195.19	189.94	113.06	86.06	88.56	91.31	99.31	80.31	87.94	69.25	90.63
1952-53	...	156.63	172.81	168.63	88.50	82.25	79.50	81.19	97.75	121.50	110.44	58.75	93.19
1953-54	132.75	142.06	157.75	152.94	101.06	69.69	83.75	83.94	84.44	110.75	87.19	76.69	83.00
1954-55	197.00	142.56	157.00	152.75	85.69	67.06	75.81	76.19	78.81	102.37	69.13	63.44	71.87
1955-56	...	159.46	158.30	158.58	75.84	54.88	77.01	73.28	79.94	107.53	60.58	77.79	79.33
1956-57	...	108.37	125.75	125.34	72.66	41.68	65.16	63.65	82.96	98.13	73.81	86.33	84.78

Year	KENDRAPARA				NOWGONG				ALL CENTRES					
	Aus	Bd. aman	Tr. aman	Combined	Aus	Aus-aman	Bd. aman	Tr. aman	Com- bined	Aus	Aus-aman	Bd. aman	Tr. aman	Com- bined
1948-49	58.13	68.81	85.13	75.75	161.44	...	85.69	80.06	106.50	137.44	113.81	89.63	107.06	110.63
1949-50	94.88	...	95.63	95.62	140.63	169.31	108.56	105.19	118.88	111.00	169.31	75.19	116.63	107.44
1950-51	68.44	61.13	73.31	69.94	153.94	111.94	96.00	112.69	120.75	113.25	146.25	91.88	102.00	102.00
1951-52	...	107.00	104.31	105.19	211.19	215.69	113.06	153.56	165.00	135.06	141.44	114.25	118.50	121.19
1952-53	53.94	48.81	86.56	75.44	179.06	230.88	81.06	130.63	137.75	114.06	155.37	92.69	102.88	104.19
1953-54	46.88	72.69	80.69	76.19	151.56	165.13	78.00	141.06	131.13	107.00	152.13	87.69	103.00	102.44
1954-55	37.37	60.06	78.56	74.13	159.00	196.25	92.37	117.75	132.69	101.94	163.94	88.63	88.13	93.13
1955-56	69.79	62.92	73.27	69.65	154.21	184.04	83.61	117.61	126.85	96.14	142.50	82.20	95.55	94.22
1956-57	67.05	67.66	80.69	76.43	169.50	177.56	83.70	131.38	143.96	101.62	163.69	61.90	89.79	91.03

Table 21.—Yield of Paddy
(Mds. per acre)

Year	MONOHARPUR					BELAKOBA					PURNEA				
	Aus	Bd. aman	Tr. aman	Com- bined	Aus	Bd. aman	Tr. aman	Com- bined	Aus	Aus- aman	Bd. aman	Tr. aman	Com- bined		
1948-49	...	13.02	13.50	13.41	5.04	7.50	11.55	9.60	10.89	19.89	13.53	14.88	13.62		
1949-50	...	3.00	22.20	18.63	4.92	7.92	11.37	9.66	11.34	...	8.25	11.94	11.34		
1950-51	...	15.27	16.14	15.84	7.71	6.99	9.09	8.61	13.20	22.59	7.02	11.85	11.97		
1951-52	...	14.18	14.94	14.69	8.48	9.76	9.99	9.78	10.10	1.85	3.88	3.19	6.82		
1952-53	...	14.73	15.67	15.43	10.07	9.60	12.46	11.59	7.91	27.58	13.62	4.01	8.63		
1953-54	9.10	13.91	19.08	17.48	11.38	6.70	9.03	8.99	8.62	20.70	11.47	10.00	9.79		
1954-55	7.41	14.32	10.23	11.54	13.36	7.46	10.15	10.30	10.71	15.24	11.38	10.50	10.76		
1955-56	...	18.07	17.69	17.78	10.92	10.56	11.73	11.44	7.86	13.59	5.85	9.74	8.87		
1956-57	...	7.40	10.46	10.39	6.43	8.92	15.70	13.79	6.14	10.73	8.12	8.70	7.57		

Year	KENDRAPARA					NOWGONG					ALL CENTRES				
	Aus	Bd. aman	Tr. aman	Com- bined	Aus	Aus- aman	Bd. aman	Tr. aman	Com- bined	Aus	Aus- aman	Bd. aman	Tr. aman	Com- bined	
1948-49	5.40	4.59	10.08	7.08	4.83	...	6.30	9.93	8.13	6.27	19.89	7.50	11.31	9.60	
1949-50	6.21	...	13.83	13.74	8.01	16.80	12.90	14.04	12.09	8.97	16.80	8.22	14.25	12.18	
1950-51	6.78	...	11.01	10.98	12.81	17.61	11.43	8.82	10.74	12.09	20.16	...	10.92	11.22	
1951-52	...	16.68	12.22	13.73	10.71	19.23	12.10	13.56	12.56	9.91	9.70	10.59	11.35	10.87	
1952-53	8.81	7.54	14.16	12.21	9.50	17.06	8.43	9.79	9.55	8.72	24.33	10.37	12.40	11.24	
1953-54	13.10	17.41	17.03	17.19	11.04	16.55	12.75	11.29	12.36	9.85	17.55	12.70	12.36	12.02	
1954-55	7.08	11.97	14.00	13.51	10.81	26.08	16.45	14.27	14.34	11.31	22.35	12.17	11.26	11.64	
1955-56	8.33	14.32	13.81	13.96	11.37	22.20	11.69	11.92	12.25	9.47	17.52	12.89	12.74	12.18	
1956-57	8.78	18.93	16.82	17.45	12.17	20.95	10.55	13.55	13.97	7.74	19.17	12.97	13.61	12.67	

Bd = Broadcast Tr = Transplanted

Table 21—Average Cost of Production of and Profit and Loss on Paddy—contd.
(Combined for all varieties)

Year	Operational cost per acre	Rent per acre	Total cost per acre	Yield per acre	Cost per maund	Average price per md.	Value of straw per paddy	Net profit (+) or loss (-) per md.	Average output per farm	Net profit (+) or loss (-) per farm	Value of family labour per farm	Net income (+) or loss (-) per farm
	Rs.	Rs.	Rs.	Mds.	Rs.	Rs.	Rs.	Rs.	Mds.	Rs.	Rs.	Rs.
MONOHARPUR												
1948-49	231.00	10.69	241.69	13.41	18.00	13.31	6.00	(+) 1.31	31.48	(+) 41.31	250.70	(+) 292.01
1949-50	191.81	12.00	203.81	18.63	10.94	14.44	4.31	(+) 7.81	41.20	(+) 321.75	119.75	(+) 441.50
1950-51	169.69	61.69	231.38	15.84	14.56	15.56	4.25	(+) 5.25	36.43	(+) 191.25	184.31	(+) 375.56
1951-52	189.94	63.81	253.75	14.69	17.25	20.38	4.06	(+) 7.19	28.88	(+) 207.06	154.69	(+) 361.75
1952-53	168.63	38.44	207.07	15.43	13.44	13.00	3.06	(+) 2.62	28.80	(+) 75.75	149.31	(+) 225.06
1953-54	152.94	40.87	193.81	17.48	11.06	12.00	2.50	(+) 3.44	38.00	(+) 130.62	135.25	(+) 265.87
1954-55	152.75	23.50	176.25	11.54	15.25	10.69	3.69	(-) 0.87	19.08	(-) 16.69	108.50	(-) 91.81
1955-56	158.58	46.45	205.03	17.78	11.53	11.13	3.94	(-) 3.54	37.73	(+) 133.49	167.93	(+) 301.42
1956-57	125.34	30.93	156.27	10.39	15.04	12.38	5.18	(+) 2.52	21.20	(+) 53.34	128.55	(+) 181.89
BELAKOBA												
1948-49	108.37	12.94	121.31	9.60	12.63	8.44	0.10	(-) 4.09	46.09	(-) 188.69	266.37	(+) 77.68
1949-50	78.19	21.00	99.19	9.66	10.25	10.00	0.44	(+) 0.19	49.59	(+) 9.44	240.69	(+) 250.13
1950-51	78.75	32.62	111.37	8.61	12.94	13.37	0.44	(+) 0.87	38.78	(+) 34.12	194.19	(+) 228.31
1951-52	91.31	49.69	141.00	9.78	14.38	27.75	0.44	(+) 13.81	45.38	(+) 626.69	250.31	(+) 877.00
1952-53	81.19	29.38	110.57	11.59	9.36	12.94	0.50	(+) 3.88	56.70	(+) 120.00	213.62	(+) 433.62
1953-54	83.94	27.31	111.25	8.99	12.37	12.81	0.56	(+) 1.00	43.70	(+) 43.69	230.87	(+) 274.56
1954-55	76.19	21.75	97.94	10.30	9.50	9.00	0.56	(+) 0.66	43.84	(+) 2.63	192.06	(+) 194.69
1955-56	73.28	23.67	96.95	11.44	8.47	8.81	0.50	(+) 0.84	55.81	(+) 46.55	205.24	(+) 251.79
1956-57	63.65	34.97	98.62	13.79	7.15	11.06	0.66	(+) 4.57	64.94	(+) 297.84	158.32	(+) 456.16
PURNEA												
1948-49	85.31	4.69	90.00	13.62	6.62	11.06	1.00	(+) 5.44	49.90	(+) 271.31	46.43	(+) 317.74
1949-50	94.88	11.62	106.50	11.34	9.37	12.75	1.00	(+) 4.38	40.37	(+) 176.62	50.75	(+) 227.37
1950-51	89.06	20.63	109.69	11.97	9.19	14.69	1.00	(+) 6.50	41.06	(+) 266.87	111.94	(+) 378.81
1951-52	90.63	23.00	113.63	6.82	16.69	16.94	1.00	(+) 1.25	16.42	(+) 20.50	41.81	(+) 62.31
1952-53	93.19	17.50	110.69	8.63	12.81	12.06	1.00	(+) 0.25	22.40	(+) 5.56	53.31	(+) 58.87
1953-54	83.00	14.25	97.25	9.79	9.94	12.81	1.00	(+) 3.87	33.50	(+) 129.81	52.81	(+) 182.62
1954-55	71.87	7.44	79.31	10.76	7.37	8.56	0.50	(+) 1.69	36.64	(+) 61.94	32.12	(+) 94.06
1955-56	79.33	7.78	87.11	8.87	9.82	8.69	0.53	(-) 0.60	26.60	(-) 16.12	26.24	(+) 10.12
1956-57	84.78	5.98	90.76	7.57	11.99	11.56	0.50	(+) 0.07	17.36	(+) 1.05	27.87	(+) 28.92

Table 21—Average Cost of Production of and Profit and Loss on Paddy
(Combined for all varieties)

Year	Operational cost per acre	Rent per acre	Total cost per acre	Yield per acre	Cost per maund	Average price per md.	Value of straw per paddy	Net profit (+) or loss (-) per md.	Average output per farm	Net profit (+) or loss (-) per farm	Value of family labour per farm	Net income (+) or loss (-) per farm
	Rs.	Rs.	Rs.	Mds.	Rs.	Rs.	Rs.	Rs.	Mds.	Rs.	Rs.	Rs.
KENDRAPARA												
1948-49	75.75	3.37	79.12	7.08	11.19	5.75	1.94	(-) 3.50	32.70	(-) 114.44	109.60	(-) 4.84
1949-50	95.62	15.75	111.37	13.74	8.13	6.19	0.56	(-) 1.38	46.17	(-) 63.69	114.81	(+) 51.12
1950-51	69.94	20.62	90.56	10.98	8.25	8.71	0.81	(-) 0.63	46.04	(-) 29.00	102.88	(+) 73.88
1951-52	105.19	23.56	128.75	13.73	9.38	8.75	1.25	(+) 0.62	59.90	(+) 37.44	161.37	(+) 198.81
1952-53	75.44	14.31	89.75	12.21	7.31	5.87	1.00	(-) 0.44	74.90	(-) 32.75	180.44	(+) 147.69
1953-54	76.19	24.87	101.06	17.19	5.88	5.38	1.38	(+) 0.88	76.50	(+) 66.94	148.37	(+) 215.31
1954-55	74.13	18.37	92.50	13.51	6.87	5.75	1.25	(+) 0.13	60.74	(+) 7.56	107.25	(+) 114.81
1955-56	69.65	21.70	91.35	13.96	6.54	6.69	1.75	(+) 1.90	61.11	(+) 116.11	100.41	(+) 216.52
1956-57	76.43	33.94	110.37	17.45	6.32	8.63	1.53	(+) 3.84	67.01	(+) 257.32	102.23	(-) 359.55
NOWGONG												
1948-49*	106.50	2.25	108.75	8.13	13.37	11.50	1.81	(-) 0.06	82.91	(-) 5.19	482.33	(+) 477.14
1949-50	118.88	22.50	141.38	12.09	11.69	10.25	1.44	0.00	24.40	0.00	110.44	(-) 110.44
1950-51	120.75	26.25	147.00	10.74	13.69	14.44	1.06	(+) 1.81	23.26	(+) 42.13	135.56	(+) 177.69
1951-52	165.00	27.44	192.44	12.56	15.31	17.50	0.87	(+) 3.06	29.75	(-) 91.06	195.81	(+) 186.87
1952-53	137.75	12.50	150.25	9.55	15.75	10.38	0.81	(-) 4.56	21.40	(-) 27.62	155.50	(+) 57.88
1953-54	131.12	21.19	152.31	12.36	12.31	10.56	0.87	(-) 0.88	37.30	(-) 32.63	186.00	(+) 153.37
1954-55	132.69	21.19	153.88	14.34	10.75	9.87	0.94	(+) 0.06	35.82	(+) 2.13	156.87	(+) 159.00
1955-56	126.85	15.72	142.57	12.25	11.64	9.00	0.87	(-) 1.77	27.30	(-) 48.28	134.22	(+) 85.94
1956-57	143.96	22.73	166.69	13.97	11.93	12.25	0.80	(+) 1.12	29.29	(-) 32.67	82.96	(+) 115.63
ALL CENTRES												
1948-49	110.62	6.19	116.81	9.60	12.18	10.31	1.81	(-) 0.06	50.32	(-) 3.13	241.00	(+) 237.87
1949-50	107.44	17.06	124.50	12.18	10.25	10.62	1.69	(-) 2.06	40.16	(-) 82.75	127.69	(+) 210.44
1950-51	102.00	31.69	133.69	11.22	11.87	14.06	1.56	(+) 3.75	36.72	(-) 137.69	120.19	(+) 257.88
1951-52	121.19	39.81	161.00	10.87	14.81	18.19	1.43	(-) 4.81	35.27	(-) 169.75	160.81	(+) 330.56
1952-53	104.19	23.62	127.81	11.24	11.37	11.56	1.19	(-) 1.38	39.80	(+) 54.75	149.13	(-) 203.88
1953-54	102.44	24.69	127.13	12.02	10.56	11.60	1.25	(+) 1.69	45.70	(+) 77.13	148.75	(+) 225.88
1954-55	93.12	17.63	110.75	11.64	9.50	8.88	1.06	(+) 0.44	39.57	(+) 17.31	119.56	(+) 136.87
1955-56	94.22	21.95	116.17	12.18	9.54	9.02	1.43	(+) 0.91	41.87	(+) 38.10	126.71	(+) 164.81
1956-57	91.03	27.13	118.16	12.67	9.33	11.31	1.38	(+) 3.36	40.20	(+) 135.07	100.37	(+) 1235.44

*For Rupohi

Table 22—Farmer's Annual Income—contd.
(Rupees)

Year	INCOME PER FAMILY					Income per capita	Income per adult unit
	Farm	Non-farm	Total	Cash	Kind		

MONOHARPUR .

1948-49	949'94	763'12	1,713'06	1,143'94	569'12	208'88	255'68
1949-50	1,278'75	1,555'31	2,834'06	1,946'94	887'12	345'62	416'77
1950-51	833'12	1,042'44	1,875'56	1,222'19	653'37	267'94	323'37
1951-52	1,237'44	1,246'19	2,483'63	1,197'00	1,286'63	359'94	442'71
1952-53	654'38	1,212'31	1,866'69	1,094'31	772'38	237'94	295'36
1953-54	593'38	1,237'12	1,830'50	1,215'31	615'19	240'88	298'27
1954-55	643'00	1,204'19	1,847'19	1,188'88	658'31	234'56	289'76
1955-56	554'66	1,334'34	1,889'00	1,218'58	670'42	230'37	285'49
1956-57	506'91	1,306'71	1,813'62	1,080'13	733'49	220'01	272'50

BELAKOBA

1948-49	415'81	203'94	619'75	387'38	232'37	93'88	110'69
1949-50	521'81	502'69	1,024'50	537'81	486'69	162'62	197'02
1950-51	642'37	375'00	1,017'37	593'81	423'56	169'56	207'63
1951-52	1,419'31	880'63	2,299'94	640'88	1,659'06	380'19	466'52
1952-53	832'31	364'69	1,197'00	407'87	789'13	181'37	230'94
1953-54	749'00	285'44	1,034'44	581'31	453'13	142'31	186'38
1954-55	517'75	269'19	786'94	381'50	405'44	132'25	165'39
1955-56	684'00	354'64	1,038'64	589'24	449'40	153'30	195'81
1956-57	826'25	363'78	1,190'03	494'21	695'82	164'71	209'47

PURNEA

1948-49	968'69	682'18	1,650'87	1,015'81	635'06	198'88	253'98
1949-50	1,080'56	968'44	2,049'00	1,289'31	759'69	240'81	305'82
1950-51	836'56	1,259'50	2,096'06	1,232'87	863'19	283'25	355'26
1951-52	689'87	1,701'44	2,391'31	1,678'19	713'12	356'88	439'58
1952-53	490'50	1,162'31	1,652'81	1,068'87	583'94	230'37	288'10
1953-54	559'37	1,254'69	1,814'06	1,194'12	619'94	255'50	319'19
1954-55	477'38	979'31	1,456'69	990'44	466'25	209'63	261'68
1955-56	580'62	950'67	1,531'29	1,163'54	367'75	218'76	275'08
1956-57	496'18	1,093'79	1,589'97	1,308'97	281'00	231'27	282'35

Table 22—Farmer's Annual Income
(Rupees)

Year	INCOME PER FAMILY					Income per capita	Income per adult unit
	Farm	Non-farm	Total	Cash	Kind		
KENDRAPARA							
1948-49	281'00	450'00	731'00	430'25	300'75	130'56	149'18
1949-50	276'56	536'44	813'00	424'31	388'69	165'94	184'77
1950-51	286'56	597'25	883'81	361'94	521'87	176'75	200'87
1951-52	590'69	1,156'56	1,747'25	493'88	1,253'37	337'31	382'87
1952-53	343'69	725'50	1,069'19	500'75	568'44	195'50	226'58
1953-54	377'44	687'94	1,065'38	412'50	652'88	198'44	230'90
1954-55	340'75	550'06	890'81	373'69	517'12	167'94	194'57
1955-56	445'38	612'95	1,058'33	447'93	610'40	188'61	215'66
1956-57	687'91	922'52	1,610'43	678'21	932'22	281'43	332'24
NOWGONG							
1948-49*	1,111'06	277'06	1,388'12	1,053'94	334'18	120'69	154'24
1949-50	544'56	658'00	1,202'56	770'19	432'37	160'37	200'43
1950-51	834'75	801'37	1,636'12	934'06	702'06	221'06	263'89
1951-52	1,154'50	1,153'63	2,308'13	1,025'75	1,282'38	318'37	412'17
1952-53	717'25	781'38	1,498'63	1,080'75	417'88	197'75	253'86
1953-54	850'00	620'88	1,470'88	891'88	579'00	199'44	255'66
1954-55	899'19	609'19	1,508'38	945'82	562'56	221'13	279'46
1955-56	636'91	861'67	1,498'58	976'44	522'14	208'14	259'12
1956-57	701'48	925'42	1,626'90	1,094'65	532'25	214'77	264'81
ALL CENTRES							
1948-49	745'31	475'25	1,220'56	806'25	414'31	150'56	184'75
1949-50	740'44	844'19	1,584'63	993'69	590'94	215'06	260'96
1950-51	686'69	815'12	1,501'81	869'00	632'81	223'69	270'20
1951-52	1,018'37	1,227'69	2,246'06	1,007'12	1,238'94	350'56	428'77
1952-53	607'63	849'25	1,456'88	830'50	626'38	208'62	258'97
1953-54	625'87	817'19	1,443'06	859'00	584'06	207'31	258'08
1954-55	578'81	726'50	1,305'31	783'44	521'87	197'63	243'96
1955-56	583'07	827'14	1,410'21	887'95	522'26	201'90	249'57
1956-57	644'96	916'47	1,561'43	934'16	627'27	218'69	269'31

* For Rupohi

Table 23—Farm Income according to Source—contd.
(Rupees per farm)

Year	Jute	Paddy	Other crops	Other farm products	Total	Net farm income
MONOHARPUR						
1948-49	303·13	317·00	85·94	243·87	949·94	949·94
1949-50	207·06	441·50	203·38	426·81	1,278·75	1,278·75
1950-51	63·88	375·56	88·81	304·88	833·13	833·13
1951-52	334·75	361·75	210·19	330·75	1,237·44	1,237·44
1952-53	31·94	225·12	110·75	286·56	654·37	654·37
1953-54	53·50	265·00	56·56	255·31	630·37	593·37
1954-55	121·00	73·62	260·50	293·19	748·31	643·00
1955-56	107·31	263·74	87·26	207·91	666·22	554·66
1956-57	5·17	176·98	163·69	209·33	555·17	506·91
BELAKOBA						
1948-49	72·69	139·37	49·50	154·25	415·81	415·81
1949-50	153·31	250·13	43·00	75·37	521·81	521·81
1950-51	154·12	228·31	47·94	212·00	642·37	642·37
1951-52	313·19	877·00	95·12	134·00	1,419·31	1,419·31
1952-53	140·50	434·37	75·94	181·50	832·31	832·31
1953-54	294·44	274·63	80·69	105·63	755·37	749·00
1954-55	164·37	194·38	66·38	98·63	523·75	517·75
1955-56	237·62	251·79	91·82	127·28	708·51	684·00
1956-57	29·06	455·16	134·88	217·53	836·63	826·25
PURNEA						
1948-49	137·50	335·81	165·94	329·44	968·69	968·69
1949-50	77·56	227·37	172·00	603·63	1,080·56	1,080·56
1950-51	85·13	378·81	85·56	287·06	836·56	836·56
1951-52	193·81	62·31	70·13	363·63	689·88	689·88
1952-53	86·31	58·75	29·69	315·75	490·50	490·50
1953-54	46·19	182·69	13·56	321·44	563·88	559·37
1954-55	80·44	94·31	22·81	298·56	496·12	477·37
1955-56	101·45	10·33	29·90	478·09	619·77	580·62
1956-57	105·68	27·47	31·18	346·66	510·99	496·18

Table 23—Farm Income according to Source
(Rupees per farm)

Year	Jute	Paddy	Other crops	Other farm products	Total	Net farm income
KENDRAPARA						
1948-49	96.06	10.56	85.75	88.63	281.00	281.00
1949-50	121.19	51.13	44.88	59.37	276.57	276.57
1950-51	120.06	73.88	8.75	83.88	286.57	286.57
1951-52	196.75	198.82	105.06	90.06	590.69	590.69
1952-53	67.37	147.69	63.88	64.75	343.69	343.69
1953-54	44.75	215.44	63.50	70.62	394.31	377.44
1954-55	129.25	107.56	68.31	55.82	360.94	340.75
1955-56	176.28	212.09	39.76	47.21	475.34	445.38
1956-57	172.16	394.52	118.54	53.60	738.82	687.91
NOWGONG						
1948-49*	346.19	499.81	121.37	143.69	1,111.06	1,111.06
1949-50	193.69	110.44	166.37	74.06	544.56	544.56
1950-51	354.63	177.69	196.31	106.12	834.75	834.75
1951-52	470.37	286.88	246.81	150.44	1,154.50	1,154.50
1952-53	167.88	57.88	289.12	202.37	717.25	717.25
1953-54	195.56	153.25	329.06	184.88	862.75	850.00
1954-55	237.94	150.88	301.12	267.00	956.94	899.19
1955-56	185.46	75.19	280.68	129.10	670.43	639.91
1956-57	297.99	106.95	317.27	119.32	841.53	701.48
ALL CENTRES						
1948-49	191.13	260.50	101.69	192.00	745.31	745.31
1949-50	150.56	216.13	125.94	247.81	740.44	740.44
1950-51	155.56	246.88	85.44	198.81	686.69	686.69
1951-52	301.75	357.37	145.44	213.75	1,018.31	1,018.31
1952-53	98.81	184.75	113.88	210.19	607.63	607.63
1953-54	126.87	218.19	108.69	187.56	641.31	625.84
1954-55	146.50	124.38	144.56	205.31	620.75	578.81
1955-56	161.33	161.62	107.23	200.99	631.17	583.07
1956-57	122.79	229.71	153.66	191.79	697.95	644.96

*For Rupohi

N. B. Income from Jute and Paddy is the net income. Income under the heads "Other crops" and "Other farm products" is the net income from 1948-49 to 1952-53 and thereafter it is the gross income. In the last column (1953-54 to 1956-57), however, net income has been worked out after deducting all farm expenses.

Table 24—Farmer's Annual Expenditure—contd.
(Rupees)

Year	PER FAMILY			Per capita	Per adult unit
	Cash	Kind	Total		
MONOHARPUR					
1948-49	1,295·69	637·94	1,933·63	235·81	288·63
1949-50	1,652·06	891·81	2,543·87	310·25	374·13
1950-51	1,023·56	786·69	1,810·25	258·63	312·13
1951-52	1,194·75	845·75	2,040·60	295·75	363·75
1952-53	1,058·06	811·75	1,869·81	238·31	295·88
1953-54	1,053·19	641·19	1,694·81	222·94	276·06
1954-55	1,074·13	623·50	1,697·63	215·94	266·31
1955-56	1,120·14	558·25	1,678·39	204·68	253·66
1956-57	1,105·40	686·60	1,792·00	217·39	269·25
BELAKOBA					
1948-49	515·81	384·75	900·56	136·44	160·81
1949-50	640·81	455·06	1,095·87	173·94	210·75
1950-51	597·31	588·88	1,186·19	197·69	242·06
1951-52	529·62	1,261·69	1,791·31	296·06	263·37
1952-53	473·62	769·63	1,243·25	188·37	239·88
1953-54	355·00	735·81	1,090·81	150·06	196·56
1954-55	406·00	469·87	875·87	147·19	184·06
1955-56	454·05	554·01	1,008·06	148·79	190·05
1956-57	577·11	689·76	1,266·87	175·35	222·99
PURNEA					
1948-49	831·94	703·06	1,535·00	184·94	236·13
1949-50	1,021·25	698·75	1,720·00	202·37	256·69
1950-51	1,373·00	604·31	1,977·31	267·19	335·13
1951-52	1,556·00	579·44	2,135·44	318·75	392·50
1952-53	1,074·50	555·44	1,629·94	227·19	284·13
1953-54	1,162·94	514·81	1,677·75	236·31	295·19
1954-55	1,051·37	338·13	1,389·50	199·94	249·63
1955-56	1,044·11	426·94	1,471·05	210·15	264·26
1956-57	1,310·26	349·18	1,659·44	241·37	294·68

Table 24—Farmer's Annual Expenditure
(Rupees)

Year	PER FAMILY			Per capita	Per adult unit
	Cash	Kind	Total		
KENDRAPARA					
1948-89	660·88	390·37	1,051·25	187·75	214·50
1949-50	470·19	399·81	870·00	177·56	197·75
1950-51	529·56	414·38	943·94	188·63	214·50
1951-52	545·19	677·44	1,222·63	236·00	272·94
1952-53	487·31	603·69	1,091·00	199·50	231·19
1953-54	425·25	460·50	885·75	165·00	191·94
1954-55	313·44	507·94	821·38	154·81	179·37
1955-56	436·08	537·38	973·46	167·67	198·36
1956-57	592·81	638·87	1,231·68	215·24	254·10
NOWGONG					
1948-49*	850·88	629·75	1,480·63	128·75	164·50
1949-50	772·37	362·13	1,134·50	151·25	189·06
1950-51	911·06	792·81	1,703·87	230·25	274·81
1951-52	1,281·38	1,068·31	2,349·69	324·13	419·56
1952-53	981·94	464·31	1,446·25	190·81	245·00
1953-54	1,112·88	437·56	1,550·44	210·25	262·75
1954-55	1,016·75	544·19	1,560·94	228·87	289·19
1955-56	969·69	539·30	1,508·99	206·71	260·92
1956-57	1,181·76	607·92	1,789·68	236·26	291·30
ALL CENTRES					
1948-49	831·00	549·19	1,380·19	174·75	212·94
1949-50	911·31	561·50	1,472·81	203·06	245·69
1950-51	886·87	637·44	1,524·31	228·50	275·75
1951-52	1,021·38	886·56	1,907·94	294·13	362·44
1952-53	815·12	640·94	1,456·06	208·81	259·19
1953-54	821·87	557·94	1,379·31	196·94	244·38
1954-55	780·50	496·25	1,276·75	193·31	238·63
1955-56	812·33	522·89	1,335·22	189·64	236·30
1956-57	958·57	592·12	1,550·69	217·19	267·46

* For Rupohi

Table 25A—Farmer's Family Budget—contd.
(Rupees per family)

Year	F O O D					Total food	Cloth- ing	Fuel & light- ing	Medical expen- ses	Social & reli- gious func- tions	Educa- tion	Interest & repay- ment of loans	Misc- ellaneous	Total expen- diture
	Farm		Purchased		Other food									
	Rice	Other food	Rice	Other food										
M O N O H A R P U R														
1948-49	520.69	58.44	219.81	203.56	1,002.50	131.63	89.88	128.06	156.19	49.31	...	376.06	1,933.63	
1949-50	630.00	232.94	134.75	766.31	1,764.00	126.19	126.25	93.00	164.56	48.75	5.50	215.62	2,543.87	
1950-51	495.50	152.82	202.37	424.37	1,275.06	52.75	123.56	35.44	68.38	21.75	8.75	224.56	1,810.25	
1951-52	599.31	190.19	364.81	444.81	1,599.12	50.31	109.88	27.19	78.12	17.44	13.06	145.38	2,040.50	
1952-53	355.62	377.13	294.44	389.62	1,416.81	56.69	111.62	27.56	55.38	23.62	1.19	176.94	1,869.81	
1953-54	344.06	201.69	236.43	364.69	1,146.87	42.94	123.13	43.44	91.94	22.44	56.56	167.06	1,694.38	
1954-55	309.94	217.44	243.87	344.50	1,115.75	59.50	119.38	86.38	80.75	28.00	11.56	196.31	1,697.63	
1955-56	212.69	270.14	375.00	291.84	1,149.67	64.07	96.69	58.49	63.32	23.49	55.79	166.87	1,678.39	
1956-57	355.95	258.88	268.61	329.98	1,213.42	51.62	95.52	37.25	124.56	19.42	96.31	153.90	1,792.00	
B E L A K O B A														
1948-49	306.75	65.88	164.62	143.62	680.87	56.19	12.63	15.56	62.44	5.12	...	67.75	900.56	
1949-50	376.81	78.13	167.81	165.94	788.69	54.43	14.00	12.81	78.31	3.25	64.69	79.69	1,095.87	
1950-51	492.31	36.69	205.62	217.94	952.56	62.31	15.00	9.38	7.56	...	40.63	98.75	1,186.19	
1951-52	1,125.19	67.87	197.19	231.62	1,621.87	43.63	12.31	4.63	3.31	6.00	18.25	81.31	1,791.31	
1952-53	590.94	135.87	65.69	265.19	1,057.69	44.19	13.37	10.63	2.06	3.75	41.75	69.81	1,243.25	
1953-54	594.31	121.06	50.88	200.50	956.75	30.50	16.50	10.69	2.06	5.43	26.19	42.69	1,090.81	
1954-55	306.94	125.44	101.25	165.68	699.31	28.56	20.63	11.00	4.25	11.81	...	100.31	875.87	
1955-56	369.33	150.10	88.83	154.64	762.90	26.60	22.99	19.49	18.17	6.38	33.55	117.98	1,008.06	
1956-57	506.02	141.39	82.11	189.59	919.11	46.22	40.67	10.63	20.33	11.62	61.81	156.48	1,266.87	

(XXX)

Table 25A—Farmer's Family Budget—contd.
(Rupees per family)

Year	F O O D					Total food	Clothing	Fuel & lighting	Medical expenses	Social & religious functions	Education	Interest & repayment of loans	Miscellaneous	Total expenditure
	Farm		Purchased		Other food									
	Rice	Other food	Rice	Other food										
P U R N E A														
1948-49	487.75	199.69	278.75	241.31	1,207.50	66.38	66.87	19.87	27.44		9.38	0.69	136.87	1,535.00
1949-50	482.69	201.44	395.00	248.12	1,327.25	52.56	78.56	14.44	36.62		7.44	23.00	180.13	1,720.00
1950-51	476.68	114.19	466.19	290.25	1,347.31	53.00	78.62	23.06	13.75		4.88	11.63	445.06	1,977.31
1951-52	428.81	151.38	474.56	386.50	1,441.25	76.81	77.63	15.56	35.19		6.56	25.50	456.94	2,135.44
1952-53	314.00	143.37	406.63	243.87	1,107.87	64.69	78.94	17.13	21.00		6.00	38.75	295.56	1,629.94
1953-54	310.75	145.62	452.69	266.31	1,175.37	55.94	81.25	14.50	16.00		13.75	39.94	281.00	1,677.75
1954-55	207.13	130.75	288.00	276.87	902.75	51.19	81.38	11.25	36.62		21.69	26.62	258.00	1,389.50
1955-56	245.36	122.65	266.80	270.26	905.07	74.30	81.68	18.35	21.15		28.14	37.09	305.27	1,471.05
1956-57	170.11	120.23	443.87	310.29	1,044.50	59.08	81.01	12.42	69.26		20.49	33.88	336.80	1,659.44
K E N D R A P A R A														
1948-49	287.75	101.75	110.37	188.63	688.50	51.37	43.94	15.56	151.25		19.94	3.56	77.13	1,051.25
1949-50	283.12	32.44	41.12	218.44	575.13	19.31	64.13	6.81	62.81		10.50	31.31	100.00	870.00
1950-51	286.37	66.88	28.19	126.25	507.69	39.00	67.81	13.94	117.25		12.31	46.25	139.69	943.94
1951-52	414.19	101.13	37.81	146.06	699.19	46.25	64.94	28.75	87.06		8.19	49.75	238.50	1,222.63
1952-53	342.50	97.31	4.56	139.38	583.75	26.56	71.50	10.50	120.06		11.69	6.06	260.88	1,091.00
1953-54	268.56	103.63	16.00	120.50	508.69	30.31	74.38	9.50	48.31		10.87	40.31	163.38	885.75
1954-55	298.50	90.25	0.81	119.69	509.25	20.31	77.06	12.25	18.19		12.38	18.13	153.81	821.38
1955-56	338.69	89.33	7.10	108.34	543.46	28.20	74.99	18.21	82.75		13.10	45.26	167.49	973.46
1956-57	434.30	90.61	8.80	114.36	648.07	36.54	80.43	17.44	124.51		14.56	77.82	232.31	1,231.68

(x x x i)

Table 25A—Farmer's Family Budget
(Rupees per family)

(xxiii)

Year	F O O D				Total food	Cloth- ing	Fuel & Medical light- ing ex- pen- ses	Social & reli- gious func- tions	Educa- tion	Interest & repay- ment of loans	Misc- ellaneous	Total expen- diture
	Farm		Purchased									
	Rice	Other food	Rice	Other food								
N O W G O N G												
1948-49*	511'00	73'38	308'06	187'94	1,080'38	115'94	24'50	23'68	42'00	...	154'38	1,480'63
1949-50	279'56	82'00	284'06	190'44	836'06	77'50	19'87	15'25	22'50	19'88	124'25	1,134'50
1950-51	430'62	78'13	386'62	127'50	1,022'87	50'56	15'69	35'13	33'87	94'00	443'12	1,703'87
1951-52	482'81	82'37	588'00	167'38	1,320'56	78'50	17'50	17'19	14'38	12'87	737'19	2,349'69
1952-53	279'69	128'56	361'75	190'06	960'06	78'81	47'75	16'69	45'50	2'69	279'75	1,446'25
1953-54	276'87	122'87	345'44	251'57	996'75	76'25	51'50	18'50	35'25	81'69	275'87	1,550'44
1954-55	322'68	184'50	285'19	191'94	984'31	70'06	57'63	18'94	55'38	89'31	275'81	1,560'94
1955-56	290'12	189'92	265'17	220'76	965'97	95'44	76'61	21'61	41'13	110'60	184'62	1,508'99
1956-57	324'96	212'00	359'33	251'90	1,148'19	100'60	85'96	24'05	60'29	165'27	186'48	1,789'68
A L L C E N T R E S												
1948-49	422'81	99'81	216'32	193'00	931'94	84'31	47'56	40'56	87'88	0'87	162'38	1,380'19
1949-50	410'44	125'38	204'56	317'87	1,058'25	66'00	60'56	28'44	72'94	28'87	139'94	1,472'81
1950-51	436'31	89'75	257'82	237'25	1,021'13	51'56	60'13	23'37	48'19	40'25	270'18	1,524'31
1951-52	610'06	118'63	332'50	275'25	1,336'44	59'13	56'44	18'62	43'62	51'62	331'88	1,907'94
1952-53	376'57	176'44	226'62	245'62	1,025'25	54'19	64'62	16'50	48'81	18'06	216'63	1,456'06
1953-54	356'94	139'00	220'25	240'68	956'87	47'19	69'37	19'31	38'69	48'94	186'00	1,379'81
1954-55	288'69	150'69	187'06	221'94	848'38	46'31	71'19	28'31	39'38	29'06	197'31	1,276'75
1955-56	290'27	165'96	234'53	211'22	871'98	58'32	70'50	27'41	44'54	56'69	188'88	1,335'22
1956-57	356'73	164'69	236'62	240'40	998'44	59'39	76'34	20'15	78'17	87'06	214'14	1,550'69

*For Rupohi

(x x x i i)

Table 25B—Farmer's Family Budget—contd.
(Rupees per adult unit)

Year	F O O D					Total food	Social & religious functions					Interest & repayment of loans	Miscellaneous	Total expenditure	
	Farm		Purchased		Clothing		Fuel & lighting	Medical expenses	Education						
	Rice	Other food	Rice	Other food											
M O N O H A R P U R															
1948-49	77.72	8.72	32.81	30.38	149.63	19.63	13.44	19.12	23.31	7.38	...	56.12	288.63		
1949-50	92.63	34.25	19.81	112.69	259.38	18.56	18.56	13.69	24.19	7.19	0.81	31.75	374.13		
1950-51	85.43	26.33	34.88	73.17	219.81	9.06	21.31	6.13	11.81	3.75	1.50	38.75	312.12		
1951-52	106.83	33.90	65.03	79.30	285.06	9.00	19.56	4.88	13.88	3.12	2.31	25.94	363.75		
1952-53	56.27	59.68	46.58	61.66	224.19	8.94	17.69	4.37	8.75	3.75	0.19	28.00	295.88		
1953-54	56.06	32.86	38.53	59.43	186.88	7.00	20.06	7.06	15.00	3.62	9.25	27.19	276.06		
1954-55	48.62	34.13	38.25	54.00	175.00	9.31	18.75	13.57	12.69	4.37	1.81	30.81	266.31		
1955-56	32.14	40.83	56.67	44.11	173.75	9.69	14.61	8.84	9.57	3.55	8.43	25.22	253.66		
1956-57	53.48	38.90	40.36	49.58	182.32	7.75	14.35	5.60	18.72	2.92	14.47	23.12	269.25		
B E L A K O B A															
1948-49	54.80	11.76	29.43	25.63	121.62	10.00	2.25	2.75	11.12	0.94	...	12.13	160.81		
1949-50	72.45	15.06	32.27	31.91	151.69	10.50	2.69	2.44	15.06	0.62	12.44	15.31	210.75		
1950-51	100.44	7.50	41.93	44.50	194.37	12.69	3.06	1.94	1.56	...	8.31	20.13	242.05		
1951-52	228.25	13.77	40.00	46.98	329.00	8.87	2.50	0.94	0.69	1.19	3.69	16.50	363.38		
1952-53	114.00	26.22	12.67	51.17	204.06	8.50	2.56	2.06	0.38	0.75	8.06	13.50	239.87		
1953-54	105.27	21.81	9.17	36.12	172.37	5.50	2.94	1.94	0.37	1.00	4.75	7.69	196.56		
1954-55	64.50	26.38	21.25	34.81	146.94	6.00	4.31	2.31	0.88	2.50	...	21.12	184.06		
1955-56	69.63	28.30	16.75	29.15	143.83	5.01	4.34	3.67	3.43	1.20	6.33	22.24	190.05		
1956-57	89.07	24.89	14.45	33.37	161.78	8.13	7.16	1.87	3.58	2.05	10.88	27.54	222.99		
P U R N E A															
1948-49	75.06	30.69	42.88	37.12	185.75	10.19	10.25	3.06	4.25	1.44	0.13	21.06	236.13		
1949-50	72.06	30.06	58.95	37.06	198.13	7.81	11.75	2.13	1.12	5.44	3.44	26.87	256.69		
1950-51	80.80	19.36	79.02	49.20	228.38	9.00	13.31	3.88	2.31	0.81	2.00	75.44	335.13		
1951-52	78.82	27.83	87.24	71.05	264.94	14.12	14.25	2.87	6.44	1.19	4.69	84.00	392.50		
1952-53	54.74	25.00	70.88	42.51	193.13	11.31	13.75	3.00	3.63	1.06	6.75	51.50	284.13		
1953-54	54.68	25.62	79.65	46.86	206.81	9.88	14.31	2.56	2.81	2.38	7.00	49.44	295.19		
1954-55	37.19	23.50	51.75	49.75	162.19	9.19	14.63	2.00	6.56	3.88	4.81	46.37	249.63		
1955-56	44.07	22.03	47.93	48.55	162.58	13.35	14.67	3.30	3.80	5.06	6.66	54.84	264.26		
1956-57	30.21	21.35	78.82	55.10	185.48	10.49	14.39	2.20	12.30	3.64	6.01	60.17	294.68		

Table 25B—*Farmer's Family Budget*
(Rupees per adult unit)

Year	F O O D				Total food	Cloth- ing	Fuel & Medical light- ing ex- pen- ses	Social & reli- gious func- tions	Educa- tion	Interest & repay- ment of loans	Misce- llaneous	Total expendi- ture
	Farm		Purchased									
	Rice	Other food	Rice	Other food								
1948-49	58.72	20.76	22.52	38.50	140.50	K E N D R A P A R A	3.19	30.87	4.06	0.75	15.69	214.50
1949-50	64.34	7.37	9.34	49.64	10.50	8.94	3.19	2.38	2.38	7.12	22.75	197.69
1950-51	65.08	15.20	6.41	28.69	4.38	14.56	1.56	14.25	2.81	10.50	31.75	214.50
1951-52	92.45	22.57	8.44	32.60	8.87	15.38	3.19	26.62	2.81	11.13	53.25	272.94
1952-53	72.58	20.62	0.96	29.53	10.31	14.50	6.44	19.44	1.81	1.31	55.25	231.19
1953-54	58.20	22.46	3.47	26.12	5.62	15.19	2.25	25.44	2.44	8.75	35.37	191.94
1954-55	65.19	19.75	0.19	26.12	6.56	16.13	2.06	10.44	2.38	3.94	33.62	179.38
1955-56	69.01	18.20	1.45	22.08	4.44	16.81	2.69	3.94	2.69	9.22	34.13	198.36
1956-57	89.60	18.69	1.82	23.59	5.75	15.28	3.71	16.86	2.67	16.05	47.93	254.10
					7.54	16.59	3.60	25.69	3.00			
N O W G O N G												
1948-49*	56.78	8.15	34.25	20.88	120.06	12.87	2.75	4.69	4.38	...	17.13	164.50
1949-50	46.60	13.69	47.34	31.75	139.38	12.94	3.31	3.75	3.19	3.31	20.69	189.13
1950-51	69.45	12.63	62.36	20.56	165.00	8.19	2.56	5.44	1.37	15.12	71.44	274.81
1951-52	86.21	14.71	105.00	29.89	235.81	14.00	3.13	3.06	2.56	27.06	131.63	419.56
1952-53	47.38	21.78	61.28	32.19	162.63	12.88	8.12	7.69	2.56	0.44	47.37	245.00
1953-54	46.93	20.82	58.55	42.64	168.94	13.88	8.75	6.00	2.50	13.81	46.75	262.75
1954-55	59.75	34.19	52.88	35.56	182.38	13.00	10.69	3.50	1.75	16.56	51.06	289.19
1955-56	50.17	32.84	45.85	38.17	167.03	16.50	13.25	3.74	2.25	19.12	31.92	260.92
1956-57	52.89	34.51	58.49	41.00	186.89	16.38	13.99	3.91	9.81	26.90	30.35	291.30
A L L C E N T R E S												
1948-49	65.10	15.37	33.31	29.72	143.50	12.63	7.56	14.87	3.63	0.19	24.37	212.88
1949-50	69.62	20.08	33.55	52.62	175.87	10.81	10.19	11.69	3.75	5.44	23.44	245.69
1950-51	80.24	16.19	44.91	43.22	184.56	9.56	11.13	9.56	1.75	7.50	47.50	275.75
1951-52	118.51	22.56	61.15	51.97	254.19	11.25	10.81	8.63	1.94	9.75	62.25	362.44
1952-53	69.00	30.66	38.48	43.42	181.56	9.56	11.44	8.88	9.19	3.37	39.12	259.25
1953-54	64.23	24.72	37.88	42.24	169.06	8.38	12.44	6.94	2.37	8.69	33.31	244.50
1954-55	53.94	28.18	34.94	41.50	158.56	8.63	13.31	7.38	3.13	5.44	36.87	238.63
1955-56	51.37	29.37	36.20	37.38	154.32	10.32	12.47	7.88	2.99	10.03	33.43	236.30
1956-57	61.53	28.41	40.81	41.46	172.21	10.24	13.18	13.48	2.93	15.02	36.93	267.46

* For Rupohi

Table 26—Farmer's Consumption of Rice

Year	Monohar- pur	Belakoba	Purnea	Kendra- para	Nowgong	All centres
ANNUAL CONSUMPTION PER FAMILY (Mds.)						
1949-50	35·45	35·85	43·47	34·93	35·84	37·18
1950-51	34·86	34·96	24·73	32·47	37·50	32·83
1951-52	29·61	32·23	34·40	34·26	39·16	33·97
1952-53	27·82	33·14	34·07	39·52	37·34	34·16
1953-54	30·82	33·08	38·28	35·10	39·05	35·30
1954-55	33·24	30·17	36·14	34·63	39·86	34·78
1955-56	32·60	34·42	38·20	34·33	39·98	35·94
1956-57	33·11	35·78	37·12	34·11	36·82	35·45
ANNUAL CONSUMPTION PER ADULT UNIT (Mds.)						
1949-50	5·21	6·89	6·49	6·75	5·97	6·20
1950-51	6·30	7·08	4·16	7·30	6·04	6·01
1951-52	5·02	6·54	6·31	7·64	7·00	6·42
1952-53	4·40	6·39	5·94	8·38	6·33	6·10
1953-54	5·02	5·96	6·74	7·61	6·62	6·32
1954-55	5·21	6·34	6·49	7·56	7·38	6·50
1955-56	4·93	6·49	6·86	6·99	6·92	6·36
1956-57	4·97	6·30	6·59	7·03	5·99	6·11
DAILY CONSUMPTION PER ADULT UNIT (Srs.)						
1949-50	0·571	0·755	0·711	0·740	0·654	0·679
1950-51	0·690	0·776	0·456	0·800	0·662	0·658
1951-52	0·550	0·717	0·692	0·837	0·767	0·703
1952-53	0·482	0·700	0·651	0·918	0·694	0·668
1953-54	0·550	0·653	0·739	0·834	0·725	0·692
1954-55	0·571	0·695	0·711	0·828	0·809	0·712
1955-56	0·539	0·711	0·752	0·767	0·758	0·698
1956-57	0·545	0·690	0·722	0·771	0·657	0·672

